



# Seagate 5005/4005/3005 Series Release Notes for Firmware Version GN280R009-02/GT280R009-02

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## Description

This package delivers firmware for 5005/4005/3005 Series controller enclosures and expansion enclosures. Expansion-enclosure firmware is embedded in GN280R009-02/GT280R009-02 firmware bundles and is updated when attached to one of the following controller enclosures. JBOD GEM version is UUT6.15\_Channel\_R2019.20.10\_RC3\_REL.

Model	Firmware version
5005	GN280R009-02
4005	GT280R009-02
3005	GT280R009-02

## Update recommendation

This is a recommended firmware update for 5005/4005/3005 Series products.

## Operating systems

Supported operating systems include the following.

### Controller/expansion enclosures

- Microsoft Windows Server 2019
- Microsoft Windows Server 2016 Hyper V
- Microsoft Windows Server 2016
- SuSE Linux Enterprise Server 15
- SuSE Linux Enterprise Server 12 SP2
- VMware ESXi Server 6.7 U1
- VMware ESXi Server 6.5 U2
- Red Hat Enterprise Linux 8.0
- Red Hat Enterprise Linux 7.6

### JBOD enclosures

- Microsoft Windows Server 2016
- Microsoft Windows Server 2019

- SuSE Linux Enterprise Server 12
- Red Hat Enterprise Linux 6.10
- Red Hat Enterprise Linux 7.6

## Installation instructions

To install this firmware by using either the Storage Management Console (SMC) or the FTP/SFTP interface, see the Seagate 5005/4005/3005 Series Storage Management Guide.

## Features or enhancements introduced in GN280R009-02/GT280R009-02

- Enclosure Management port is now compliant with IEEE 802.1x network authentication protocol.
- Added Storage Controller capability to detect Field Accessible Reliability Metrics Specification time series log.
- Added support to invoke and monitor Seagate Lyve Pilot agent (Unified Data Service).
- Added Unified Data Service commands `set protocol` and `show protocol`.
- Changed the default scrub interval from 24 hours to 360 hours (15 days).
- Added support for collecting logs.
- Added support to collect drive logs for Field Accessible Reliability Metrics frames.
- Added capability to allow full resynchronization of replication sets at will.

## Issues fixed in GN280R009-02/GT280R009-02

- Developed Unified System Management (USM) Upgrade Toolkit for 5U84 and 2U12/2U24 JBODs.
- Fixed an issue where both controllers crashed after controller B was brought back up while deleting a volume.
- Fixed an issue where a dual controller crashed during the disaster reverse recovery operation, done using `kill/unkill` on the system.
- Fixed an issue where clear expander-status fails to clear expander-status for 5U84 enclosure.
- Fixed an issue where a crash happened due to a timeout detected by the auto stall recovery code during the shutdown/reboot test. This issue happened when couple of disks become bad during the shutdown/reboot test, due to which the disk group got quarantined, and one of the controllers detected a 'shutdown stall' for the other controller.
- Fixed an issue where the wrong disk was being failed during a bad-block recovery.
- Fixed an issue of offline disk groups remaining quarantined even after the controller was live.
- Implemented **Salvage** mode for field recovery red-alerts.
- Fixed issue of reading incorrect enclosure configuration page and swapping of incorrect enclosure configurations, when the system is busy in SCSI rescanning.
- Fixed an issue of controller crash due to heartbeat loss.
- Fixed the wrong reporting where power supply failure reported capacitor failure.
- Fixed an improper system request for a Performance Tier license after upgrade to GN280R002-03/ GT280R002-03.
- Fixed an issue in the WBI where the Create Snapshot scheduler did not correctly convert AM/PM schedules (12-hour time format) to 24-hour time format.
- Fixed an issue where the controller crashed while deleting read-cache disk group.
- Fixed an issue where a user could successfully upload an expired certificate and install it to the array.
- Added the ability to retrieve UDS and SM2 logs from the storage system without removing the disks. The logs can be retrieved using the `get logs` command or the `ftp` command.
- Fixed an issue where, after firmware update, power supply firmware and VPD versions were not updated in the output of the CLI `show versions frus` command.
- Fixed an issue where disk scrub was being attempted on FDE locked disks, causing them to be marked as 'Leftover'.

- Fixed an issue where the replaced controller's IP address changed back to the controller's old IP address after enclosure power cycle or shutdown restart of both controllers.
- Deprecated no-mirror cache optimization mode.
- Global spare drive now gets selected by slot affinity and gets added as disk group spare.
- Fixed the nested topology change issue.
- Fixed issues where error detected in scrub caused controller to get killed.
- The complete debug region memory buffer can now be used to extract disk logs.
- Fixed self assert in case of compact flash diagnostic failure during boot.
- Seagate storage systems now implement mechanism of self-detection of multi boot failure and avoids a re-boot.
- For ADAPT disk groups, fixed an issue where disks that were not used in an expand operation were associated with the disk group during rebalance operation.
- Made interprocessor communication (IPC) path changes to handle multi-context invocation and incorrect error address reporting.
- Fixed an issue where after upgrading to GN280R002-03/GT280R002-03, system is asking for Performance Tier license.
- Fixed an issue where it was not possible to unlock FDE disk after using the `set fde-state repurpose` command.
- Fixed an issue where while using WBI, it was not possible to set the SMTP server name if the domain suffix was more than 6 characters long.
- Fixed an issue where while receiving traps on MIB browser it was displaying IP address of a different controller rather than the address of the controller on which it was configured.
- Fixed an issue where the FDE passphrase was not masked in the GUI.
- Fixed a large memory leak in root platform.
- Fixed an error where the shared library `libz.so` was not loaded correctly.
- Fixed an issue of flooding of logs due to repeated SCSI enclosure services (SES) page 2 control requests.
- Fixed an issue where the virtual pool went offline due to unreadable metadata.
- Fixed GEM CLI `ddump_pwrmgmt` to show correct power cooling module /powersupply unit serial no.
- Fixed disk-zone distribution among stripe zones in ADAPT rebalance after disk replacement.
- Fixed a race condition that happened between task management function (TMF) sent and the TMF aborted.
- Fixed issue where a disk-group initialization failure and then a scrub abort on the same disk group caused the disk group to go offline.
- Fixed the issue of data corruption that happened during adapt target rebuild and rescan.
- Security enhancements implemented.

## Known issues and workarounds

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**Issue:** Controller A crashed during a controller pull/push operation.

**Workaround:** None. This was a rare case.

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**Issue:** GN280R007-02/GT280R007-02 has no midplane VPD/CPLD and PSU files included in the build.

**Workaround:** Use the FTP process to upload the midplane VPD/CPLD and PSU files.

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**Issue:** Disk groups went offline as linear disk groups while upgrading from GN280R007-02/GT280R007-02 to GN280R007-03/GT280R007-03.

**Workaround:** Use the CLI `Trust` command.

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**Issue:** The WBI error message (schedule was not found) is not appropriate while modifying/expanding the size of a volume.

**Workaround:** Use the CLI.

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**Issue:** SSD disk groups can be created without a Performance Tier license.

**Workaround:** No workaround necessary.

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**Issue:** MC (partner) is not ready while downgrading to GN275R003-01/GT275R003-01 with PFU disabled.

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**Workaround:** None. Firmware must be upgraded/downgraded per the code load sheet.

**Issue:** Incorrect queue depth values are displayed for historical performance statistics.

**Workaround:** None.

**Issue:** The maximum volume size limit for an ADAPT virtual or linear disk group is 1 PiB ; for a non-ADAPT virtual disk group it is 128 TiB; and for a non-ADAPT linear disk group the maximum size is limited only by the size and capacity of member disks.

**Workaround:** None.

**Issue:** When the drive spin down feature is enabled, it is not possible to unlock the FDE drives.

**Workaround:** Disable the drive spin down feature and wait for approximately 2-3 minutes, and perform a manual rescan. Once the drives spin up, the system can be unlocked by entering the FDE passphrase.

**Issue:** The Management Controllers reboot in a loop after creating a monthly snapshot schedule.

**Workaround:** While creating a scheduled snapshot, clear the **Repeat every** checkbox.

**Issue:** One controller crashes during repetitive drive pull and insertion on RAID 10 disk group.

**Workaround:** None.

**Issue:** A disk detected timeout when you do a repetitive shutdown, restart with adapt reconstruction and manual rescan.

**Workaround:** None.

**Issue:** When using the Storage Management Console to replace a disk, the health panel does not correctly reflect the LED status of the disks until the disk group rebuild starts. Any amber LEDs illuminated on the disks are not shown as illuminated in the health panel.

**Workaround:** The health panel is updated after the disk group is rebuilt.

**Issue:** In the Storage Management Console and the `set chap-record` command, the `secret` and `mutual-secret` parameters accept the entry of a double-quote character (`"`), which is an invalid character.

**Workaround:** If a double-quote character was included in the `secret` or `mutual-secret` parameter, remove it and re-create those entries.

**Issue:** When creating a username during initial CLI login, the following invalid characters are allowed in the username: angle brackets (`<>`) and single quote (`'`).

**Workaround:** Re-create the username without using angle brackets (`<>`) and single quote (`'`).

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## Effective date

June 2021