

# HPE MSA Firmware Release Notes for MSA 1050 (VE270P002-02) and MSA 2050/2052 (VL270P002-02)

#### **Abstract**

This package delivers firmware version VE270P002-02 for the HPE MSA 1050 and VL270P002-02 for the MSA 2050 and 2052 Storage systems.

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# **Description**

This package delivers firmware for the HPE MSA 1050, MSA 2050, and MSA 2052 storage systems.

# **Update recommendation**

Update recommendation: Recommended - HPE recommends users update to this version at their earliest convenience.

# Supersede information

Supersedes:

MSA 1050 firmware version VE270R001-01

MSA 2050/2052 firmware version VL270R001-01

#### **Product models**

- MSA 1050 Storage System
- · MSA 2050 Storage System
- MSA 2052 Storage System

# Additional devices supported

**NOTE**: A valid HPE Passport connected to the MSA hardware will be required to download the firmware. See <a href="https://support.hpe.com/hpsc/doc/public/display?docLocale=en\_US&docId=emr\_na-c05349541">https://support.hpe.com/hpsc/doc/public/display?docLocale=en\_US&docId=emr\_na-c05349541</a> for the HPE Passport for MSA arrays.

#### HPE MSA 1050 and MSA 2050/2052

The MSA 1050 and MSA 2050/2052 array controller enclosures support the cascading of disk enclosures. The following table lists supported disk enclosure models and firmware versions.

Cascaded disk enclosure model	Recommended disk enclosure firmware
MSA 2050	S200B41
MSA 2040*	S200B41
D2700*	0149 or higher

<sup>\*</sup>The MSA 2040 and D2700 disk enclosures are supported only as part of an upgrade from the MSA 1040/2040 storage systems.

IMPORTANT: After updating array controller firmware or connecting new disk enclosures to an existing controller enclosure, verify the firmware compatibility of all devices. If needed, obtain and install the controller or disk enclosure firmware. Firmware is available for download from the MSA Firmware website at <a href="https://www.hpe.com/storage/MSAFirmware">https://www.hpe.com/storage/MSAFirmware</a>.

# **HPE MSA** notification best practices

To effectively monitor the health of the MSA array, it is a best practice to:

- Enable notifications through SNMP, email, or syslog settings in the user interfaces.
- Set alerts to a Warning level to ensure that you are monitoring your system for possible failures.
- Perform validation of notification settings periodically after firmware load or component replacement to guard against changes in infrastructure or configuration settings.

# Important firmware notes

- · Windows Server 2012 management integration:
  - Hewlett Packard Enterprise recommends that you update the Windows cache by using the cmdlet, Update-StorageProviderCache -DiscoveryLevel Full -Name <storageProviderName> manually, after attempting any storage provision operations that use the MSA management interface.
  - Hewlett Packard Enterprise recommends that you use the MSA management interface (Storage
    Management Utility or Command Line Interface) to modify volume mappings, delete volumes, or modify
    volume names. Manually update Windows cache by using the cmdlet, UpdateStorageProviderCache -DiscoveryLevel Full -Name <storageProviderName>.
- System Center VMM integration:
  - Running operations concurrently is supported, up to the limit of four concurrent operations. Operations
    include creating objects (for example, LUNs, clones, snapshots) and registering objects to hosts or four
    node clusters.
- · Windows Server 2012 management and System Center VMM integration:
  - If SCVMM or Windows Server 2012 manages only MSAs and not any other arrays, Hewlett Packard Enterprise recommends that you disable Windows Indication subscription. . To disable the Indication subscription, modify the registry key HKEY\_LOCAL\_MACHINE\Software\Microsoft\Windows \Current Version\Storage Management\EnableIndications value from 1 to 0 and restart Windows Standards Based Storage Management Service.
  - If you want to enable the Indication subscription at Windows Server 2012, Hewlett Packard Enterprise recommends that you configure the Indication based on the instructions provided at <a href="http://blogs.technet.com/b/filecab/archive/2013/05/22/using-indications-with-the-windows-standards-based-storage-management-service-smi-s.aspx">http://blogs.technet.com/b/filecab/archive/2013/05/22/using-indications-with-the-windows-standards-based-storage-management-service-smi-s.aspx</a>.
- The MSA Storage System contains an embedded SMI-S provider for use by SMI-S client applications. The
  embedded provider is designed to support MSA Storage System configurations with up to 24 hard drives and
  up to 250 mapping paths. A mapping path is defined as anMSA Storage System volume presented through
  an MSA Storage System target port to a host initiator.
- Smart Array SAS HBAs are not supported with SMI-S based applications that include System Center VMM and Windows Server 2012 Integrations.
- Some older drive firmware Smart Components may not be compatible with the MSA 1050, 2050, and 2052
  and could cause the Smart Component to stall. If this occurs, Hewlett Packard Enterprise recommends using
  the .FLA or .LOD file from the HPE support center with the SMU to update the drive firmware.
- When using Windows Dynamic Disk (software RAID) on top of a hardware RAID, cautions must be
  considered. For more information, see the section real world: dynamic versus basic disks on the topic at
  <a href="http://technet.microsoft.com/en-us/library/dd163558.aspx">http://technet.microsoft.com/en-us/library/dd163558.aspx</a>.

- Failover and failback times are affected by the number of system volumes; the more volumes there are on the system, the more time is required for failover and failback to complete.
- The open-source bundle for this firmware release can be found by going to <a href="https://www.hpe.com/support/">https://www.hpe.com/support/</a>
  <a href="https://www.hpe.com/support/">hpesc</a>, entering the product name in the search bar, and looking in the **Drivers and Software** list.

# **Operating systems**

This release is supported on the following operating systems:

- Microsoft Windows Server 2012
- Microsoft Windows Server 2012 R2
- · Microsoft Windows Server 2016
- Red Hat Enterprise Linux 6
- Red Hat Enterprise Linux 7
- SuSE Linux Enterprise Server 11
- SuSE Linux Enterprise Server 12
- VMware ESXi 6.x
- HP-UX 11.31 (MSA 2050 only)

For more information about operating systems supported by the HPE MSA arrays, see the HPE Storage Single Point Of Connectivity Knowledge (SPOCK) website at <a href="http://www.hpe.com/storage/spock">http://www.hpe.com/storage/spock</a>.

# Languages

Languages support for this release:

- English
- Spanish
- French
- German
- Italian
- Korean
- Japanese
- Dutch
- · Chinese (traditional)
- · Chinese (simplified)

## **Enhancements**

The following enhancements have been added in the VE270R001-01/VL270R001-01 release:

Increased potential random performance on MSA 1050 storage system.

Enabled the ability to authenticate against an Active Directory domain.

Added IO Workload information to the SMU.

Added message showing disk group creation succeeds when a drive failure occurs.

Disabled all SSL and TLS protocols except TLS v1.2.

Updated OpenSSH to 7.7p1.

Updated OpenSSL to 1.0.2o.

#### **Fixes**

The following issues have been resolved in the VE270P002-02/VL270P002-2 release:

Authenticated session security vulnerability.

The following issues have been resolved in the VE270R001-01/VL270R001-01 release:

PCle buses running at less than optimal speed.

If reconfiguration of FDE features is attempted after clearing the Lock Key IDs and before power cycling the system, information in FDE systems may display inaccurately.

Attempting to modify the peer connection may produce the error message "The operation cannot be completed because the system contains replication sets using this peer connection – The following suspended replication sets have paused replications that must be aborted to proceed: [replication set names]". This issue is seen when disks are migrated from MSA 1040/2040 systems to MSA 2050 systems when replications were still active.

A generic error message of "Command Failed" may be seen in the event log when a peer connection has been lost.

Replication snapshot history index increases every time a replication is attempted regardless of the outcome of the replication or the value of replication snapshot history setting.

When a replication set is suspended when incorrect CHAP settings were entered, the replication set did not resume after CHAP settings were corrected.

#### The following issues have been resolved in the VE270R001-01/VL270R001-01 release:

Changing the snapshot space management policy from "notify only" to "delete" when the space is over 100% does not trigger deletion of the snapshots.

If the secondary array pool crosses the high threshold, the primary system may not suspend replications.

Event 8 message with unknown reason does not provide recommended action.

Attempting to delete a replication set results in an error "Unable to delete the replication set: The operation cannot be completed because the replication set is not defined on the remote system."

Scheduling of replication fails with an error "Scheduler: The scheduler was unable to complete the replication. - An invalid device was specified."

Attempting to delete a replication set results in an error "Unable to delete replication set. The operation cannot be completed because communication cannot be established with the peer."

The replication set status appears differently in MSA 2040/1040 and MSA 2050/1050 systems when a replication is aborted. MSA 2050/1050 shows the status as Suspended, MSA 2040/1040 shows the status as Unsynchronized.

Attempting to delete a peer connection when a controller is down on the peer system will fail with an error of "Cannot find the peer connection on the system".

Unable to delete a volume that has no name shown in the SMU.

Unable to restart a controller from the SMU on the controller that is shut down.

Using SMI-S in Windows cannot create or delete volume and cannot discover (rescan) array to get instances such as volume, pool.

Attempting to delete all replication sets can result in a failure of "Unable to delete replication set. An internal timeout has occurred."

When using replication schedules, snapshot creation for the replicated volumes may fail with the error "A replication snapshot failed to be created. A duplicate name was specified."

Attempting to modify the queue policy on a replication set will fail and the snapshot information will not match on primary and secondary systems when there are 254 volumes/snaps in the snap tree of the primary or secondary volume.

PCIe Link Recovery causes a controller to cease operation.

More than 254 registrants on a volume causes a controller reboot.

#### The following issues have been resolved in the VE270R001-01/VL270R001-01 release:

Controller enters a continuous warm boot loop during boot or firmware update.

Volume group will not allow creation of a name that duplicates a host group name.

Syslog events are not generated unless SMTP settings are input.

Incorrect Temperature sensor #2 event warnings are generated.

Windows Server 2016 and SCVMM 2016 cannot map volumes for iSCSI.

The CLI incorrectly shows a successful return status to the test email command when email settings are disabled.

When getting logs from the array, an error of "ERROR: Failed to obtain Storage Controller logs - Application not responding" or "421 Timeout Connection closed by remote host" may be seen.

In the Create Replication Set panel in the SMU, the ability to set the schedule at the bottom of the panel does not appear after the creation of the replication set.

Attempting to simultaneously run a volume copy and replication on a single snapshot, generates the error: "Error: The operation cannot be completed because it conflicts with an existing volume copy in progress."

Snapshots schedules fail with the error "renaming a snapshot, failed to locate the oldest snapshot" after modifying the retention count to 1.

Modifying the replication set queue policy from the secondary system may fail with the error "Error: Command failed."

Information in the SMU may not be consistent with information in the CLI, partner controller, or peer connection.

Entering space characters at the beginning or end of a Remote User Name or Password will cause the peer modification to fail.

## Issues and workarounds

The following is a cumulative list of known issues and workarounds:

**Issue:** The license information in "query peer-connection" incorrectly display as disabled for Volumecopy, SRA, VDS, and VSS.

Workaround: Use the show license command to display the correct license information.

**Issue:** Attempting to clear a replication queue from the secondary volume's system returns an error message that there are no queued replications pending.

**Workaround:** The queued replication can be cleared from the primary volume's system.

**Issue:** Virtual replication will at most use two ports and will not re-evaluate which ports to use until the replication has been suspended and resumed or a new replication is started.

Workaround: None.

**Issue:** English strings are seen in other locales.

Workaround: None.

**Issue:** Downloading performance metrics from the SFTP or FTP interface fails with "The command had an invalid parameter or unrecognized parameter" when 24-hour format is used with AM|PM parameter.

Workaround: Use either 12-hour format with AM|PM parameter or 24-hr format.

Issue: In the SMU, mapping a volume to a LUN results in a generic "Error: Command failed" response.

**Workaround:** Verify that the LUN number is not already in use for that host, or, if using the default mapping, that the LUN number is not already in use on that port.

**Issue:** In the SMU, after repurposing a drive, the info displayed in Repurpose Disk List can take a longer time than expected to refresh.

Workaround: Refresh the browser, or log out and log back in to the browser.

Issue: The description of RAID type is not displayed in the hover tip in Internet Explorer.

Workaround: Look up RAID type through help, or use another supported browser.

Issue: Mapping over 500 volumes at the same time in the SMU may not complete all mappings.

**Workaround:** If possible, perform large number of volume mappings in chunks to avoid timeout and other errors. When mapping many volumes from the SMU, avoid refreshing the browser while the operation is in progress.

Issue: The Browse button fails to open the file selection pop-up in the license screen.

Workaround: Refresh the browser.

**Issue:** After creating a volume, the volumes table is not updated for multiple seconds.

**Workaround:** None, the table will be updated after a short time.

Issue: After adding disk-groups, the performance charts displayed in the SMU show incorrect data.

Workaround: Gather disk statistics using the CLI or reset the performance statistics.

Issue: Unable to map volume to specific iSCSI host ports in VMWare Vcenter plug-in.

Workaround: Map volumes in the CLI or SMU.

Issue: In the SMU, negative values may be displayed in the Capacity Utilization>Reserve column.

Workaround: Use the CLI to confirm the correct values.

**Issue:** SMI-S will report the device id of IOMs in disk enclosures as "0" for the B controller and "1" for the A controller.

Workaround: Use the ElementName to determine whether the A or B controller is in use.

Issue: Some 314 events are not being reported by SNMP trap for the partner controller.

Workaround: Register for events for both controllers.

**Issue:** After deleting large amounts of data in a replicated volume, the secondary system will not reflect the space reclamation immediately.

Workaround: None. The secondary system will take an extended time to reclaim the space.

**Issue:** Creating a replication set may result in an error of "A duplicate name specified" when a volume-group with the same name is present on the system.

**Workaround:** Create a replication set with a unique name.

**Issue:** Unable to delete a snapshot of a legacy linear volume through the SMU.

**Workaround:** After verifying that data has been backed up or migrated to virtual storage, delete the linear disk-group.

**Issue:** The reset disk-group-statistics command does not reset the disk-group-statistics.

Workaround: Use the pool-statistics commands to reset and monitor the pool statistics.

**Issue:** During firmware upgrade through SFTP/FTP, the message: "failed create FIFO: file exists" is displayed.

Workaround: Restart the storage controllers and reattempt the firmware upgrade.

**Issue:** After receiving a successful message for deleting a schedule, the SMU may still display the schedule. Attempts to delete the schedule again will result in an error of "Unable to delete the schedules the scheduler was not found."

Workaround: To reflect the successful deletion, refresh the browser.

Issue: Unable to schedule volume copies through the CLI interface.

**Workaround:** Perform a manual copy in the CLI.

**Issue:** Attempting to unmap unsupported Linear volumes will incorrectly show a success message or shows a failure message in the SMU.

**Workaround:** None. Delete the linear volumes if the data is not needed or has been migrated to virtual volumes.

Issue: The online help may not display correctly in certain versions of Internet Explorer 11.

Workaround: Use another browser to view the online help.

Issue: Management controller continually returns "MC Not Ready" error to all CLI commands.

Workaround: Restart the Storage Controller from the other Controller.

**Issue:** Attempting to delete a snapshot in the SMU fails with an error of "Unable to delete the volumes: The specified volumes was not found."

Workaround: Refresh the browser or use the CLI to delete the snapshot.

Issue: Settings mismatch after executing restore defaults when compared with CLI Reference Guide.

Workaround: Review controller settings and change as needed.

Issue: Unable to download historical disk-performance statistics in the SMU.

Workaround: Use the SFTP or FTP interface to download the disk performance statistics.

Issue: Unable to replicate the last snapshot through the SMU.

Workaround: Use the CLI to replicate the last snapshot.

Issue: A 10Gb iSCSI SFP will display Ethernet compliance as "No support" in the port details.

Workaround: None, the SFP will function properly.

**Issue:** After suspending replications and moving disks from one system to another system, the query peer connection will show the old IP address from the previous system.

Workaround: Update the peer connection information with the new IP addresses.

**Issue:** After changing the host port IP address and clicking the **OK** button, there may be a delay before the confirmation popup window appears.

**Workaround:** None. Wait for the confirmation popup window to appear.

Issue: Attempting to set a schedule with exclude weekend days from scheduler fails.

Workaround: Ensure the schedule starts on a weekday.

**Issue:** The replication status on the primary system shows "running" while the status on the secondary system shows "unknown" even if peer is offline.

**Workaround:** Allow for up to 30 seconds before checking the status on both systems.

**Issue:** Attempting to display historical performance data with 33 or more disks selected in the SMU will result in an error of "Failed to collect historical performance data. The value of the timerange parameter is invalid. Retry the request with a valid value".

Workaround: Select 32 disks or less when displaying historical data.

**Issue:** Performance statistics may be inaccurate when a controller is failed over to the partner controller.

Workaround: Correct the unhealthy component.

**Issue:** When attempting to replicate a volume group, selecting more than one volume from the group will result in an error message.

**Workaround:** Select a single volume from the volume group and create the replication set for the volume group.

Issue: Downloading logs from the array may fail with an error "Operation Complete 150 Error."

**Workaround:** Restart SC from surviving partner and wait for communication between controllers to be active to retry.

**Issue:** A generic error "Creation of replication snapshot failed..." may be seen in the event log due to a name conflict during automated snapshot name creation.

**Workaround:** Avoid creating volumes or snapshots which are in the same format as the automatically created snapshot names.

**Issue:** Some MC commands can be rejected with "Unable to validate licensing limits. - The MC is not ready. Wait a few seconds then retry the request."

Workaround: This message occurs during high load conditions. Retry the commands during reduced load.

**Issue:** Unable to log in to one of the management controllers with valid credentials.

Workaround: Restart the management controller from the other controller.

Issue: Online help incorrectly shows information pertaining to IPv6 for the management port.

Workaround: None. This information is incorrect, IPv6 is not available for the management interface.

**Issue:** Using SMI-S from Windows cannot create/delete volume and cannot discover (rescan) array to get instances such as volume, pool, etc.

**Workaround:** Run the reset smis-configuration command from the CLI. This command will reset all SMI-S configuration and require that all servers using SMI-S are reconfigured. Consult the CLI guide.

**Issue:** The **Number Of Snaps** attribute shown in the hover panel of a snapshot may include the base volume and internally used replication snapshots.

Workaround: None. The base volume and replication snapshots do not count against the licensed value.

**Issue:** Deleting a replication set may not delete the tasks and schedules associated with that replication set. As a result, events may indicate the tasks attempt to run and they fail.

Workaround: Delete the tasks and schedules associated with the deleted replication set.

Issue: Using SMI-S in the Windows SCVMM environment may have a failure mapping a volume.

**Workaround:** Attempt to map the volume again using SCVMM.

**Issue:** Updating the drive firmware failed with "Device error: Cannot open bridge connection: /dev/mouse9 Failed to open CAPI pipe 9 CAPI error: Unable to open the pipe for code load status" from the Storage Controller.

**Workaround:** Ignore the CAPI error message and verify the correct firmware version through the show disks command.

**Issue:** The health status in the CLI command show peer-connection may report OK when the connection status is "offline."

Workaround: Retry the command.

**Issue:** Replication progress may exceed 100%.

Workaround: None. The replication may have been suspended and needed to transfer additional data.

**Issue:** In the Create Replication Set panel of the Replications topic in the SMU, internal snapshots may be listed in the "volume group" table.

**Workaround:** Ignore snapshots that have a ".xx" at the end.

**Issue:** The SMU may become unresponsive during controller failover / failback operations.

**Workaround:** Allow up to 60 seconds for the controllers to finish the operation and refresh the browser.

**Issue:** "An internal timeout has occurred" error may be seen on a system under load when initiating a command.

**Workaround:** Wait a couple of minutes and retry the command.

Issue: Disk group creation fails when attempting to manually name a new disk-group.

Workaround: Do not create a disk group with the lowercase with "dga" or "dgb".

Issue: Unnecessary information is present in the CLI reference guide and CLI online help.

- load license command -- Only used internally by the system
- show host-phy-statistics -- Not supported on SAN controllers
- set advanced-settings independent-cache parameter -- Not supported
- set advanced-settings DSD parameters -- Specific to linear storage
- show fenced-data volumes parameter -- Specific to linear storage
- show snapshots Status-Reason values -- Some values are specific to linear storage
- show snapshots Snap-Pool field -- Specific to linear storage
- show volumes Snap-Pool field -- Specific to linear storage
- verify links command -- Specific to linear storage

Workaround: None.

**Issue:** Copying a user in the SMU does not correctly copy all protocol settings to new user.

Workaround: Create the copy in the CLI, or manually modify protocols after the copy is complete.

**Issue:** After updating the firmware on the D2700 enclosure, the new version is not correctly shown in the CLI or SMU.

Workaround: Force a rescan of the array using the rescan command.

**Issue:** Disk drive over-temperature warnings may not be cleared in the system health after the drive temperatures return to normal range.

Workaround: Restart both management controllers one at a time and refresh the browser.

**Issue:** A system with CHAP enabled connected to peers with CHAP misconfigured or disabled will not be able to modify peer connections with those peers.

Workaround: Configure CHAP records on all systems correctly.

**Issue:** After resetting pool statistics, the updated data will not be immediately available when executing the show pool-statistics command.

**Workaround:** Wait a minute after resetting the pool-statistics before executing the show pool-statistics command.

**Issue:** Replication set status may not match in Primary and Secondary Peer systems during a suspended scheduled replication. The replication status will show "Ready" in Secondary System. The Primary System will erroneously show "Running".

Workaround: If this condition persists for a long time, manually abort the replication and restart it.

Issue: Scheduled snapshot may not be created successfully on a controller that is down.

Workaround: Recover the failed controller.

**Issue:** Windows Server 2016 may report "Unable to Open Port" when using the USB CLI and attempting to use Hyperterm or PuTTY.

**Workaround:** Use another terminal emulator.

Issue: After changing the system name, an SNMP trap event for the name change was not sent.

Workaround: None.

Issue: Peer connection fails due to "The operation cannot be completed because
communication cannot be established with the peer. - Remote port not detected via
Local Port(s)."

**Workaround:** If communication issues occur between peers, validate and verify the CHAP configuration on all peers.

**Issue:** In the SMU, the FDE passphrase will not accept a phrase that contains spaces.

Workaround: If spaces are required in the passphrase, use the CLI commands to set the passphrase.

**Issue:** Creating a schedule for snapshots may result in an error unable to create snapshot task — the task already exists when attempting to recreate the scheduled task.

**Workaround:** Delete the original schedules and restart the management controller.

**Issue:** The management controller may be unresponsive after modifying the replications set name from the secondary system.

**Workaround:** Restart the management controller from the other controller.

**Issue:** Snapshot schedules for volumes that are expanded may get deleted.

Workaround: Recreate any schedules associated with the volumes.

**Issue:** Using a blank in the Create Peer Connection area of the SMU may produce the error The value cannot include any of the following characters: ", < \

Workaround: Create Peer Connection Names without blank characters.

**Issue:** IOM version will display N/A in a failed state in an event notification.

Workaround: Verify IOM details by using show frus in the CLI.

**Issue:** Schedules with the constraint of "every 2 Weeks, Only Any Weekday" may not run.

**Workaround:** Modify the constraint on the schedule.

**Issue:** The status of replication sets between the primary and secondary systems may not always agree. One may say ready while the other may say unsynchronized.

Workaround: Restart the storage controllers on the primary system.

**Issue:** Creating a replication set will fail with the error The maximum number of snapshots for the volume was exceeded.

Workaround: Delete a snapshot or create the replication set with the queue policy set to discard.

**Issue:** When downloading CSV data from the "Pools" table, the fifth column is incorrectly labeled as "Allocated Size", when it should be "Available Size".

**Workaround:** After downloading CSV data from the Pools table, change the label of the fifth column from "Allocated Size" to "Available Size".

**Issue:** The resolved notification related to a power supply failure may show the power supply status as NA.

**Workaround:** Verify the power supply status in the management controller.

**Issue:** In a replication configuration involving three or more systems, system A can change the name of a peer connection it has with system C to the same name as the peer connection system B has with system C, resulting in system C having two peer connections with the same name.

**Workaround:** Change the name of the peer connection from system A to be unique.

**Issue:** The show fan-modules command will not show any fan-module objects for the D2700 Enclosure.

**Workaround:** Use the show fans command to see the fan status of the D2700 enclosure.

**Issue:** On the Notifications tab for System Settings in the SMU, when setting the EMAIL system settings, the tabs for **Email**, **SNMP**, **Managed Logs**, and **Syslog** scroll out of the view range.

**Workaround:** After configuring the **Email** setting, scroll to the top of the settings to access the other tabs.

Issue: Disks Groups may not be able to be deleted while new Disk Groups are being added.

**Workaround:** Wait for the **Add Disk Group** task finish before attempting to delete Disk Groups.

**Issue:** If the snapshot deletion policy is enabled but all snapshots are set to never delete, repeated snapshot deletion failure events may be generated.

Workaround: Do not set a snapshot deletion policy if all snapshots need to be preserved.

**Issue:** When the system is running in a degraded mode with a single array controller, D2700 enclosures show as degraded.

Workaround: Return system to fully redundant mode with two running controllers.

**Issue:** Cannot abort a replication synchronization job that is in the prepare state.

Workaround: Retry the abort command after the synchronization job is running.

Issue: Resuming an unsynchronized replication set has no effect.

**Workaround:** Do not attempt to resume an unsynchronized replication set. Start a replication to synchronize the replication set.

Issue: Volume copy will fail if the copy will take the pool over the high threshold point.

Workaround: None.

Issue: Modifying peer connection using a remote host FC WWN may result in an error.

**Workaround:** Restart the management controller on the local system.

**Issue:** Controller ceases operation when changing Paged Storage pool mode to large pools when the controllers are under heavy load.

Workaround: Quiesce IO when changing the pool mode.

**Issue:** When attempting to clear the replication queue from the secondary system, an error mistakenly states that there are no replications in the queue.

**Workaround:** Clear the replication queue from the primary system.

**Issue:** Host aborts may be seen or Storage Pool may go to offline state when adding Disk Group components under heavy IO workloads with scheduled replications running.

Workaround: Add Disk Groups under lower load or without scheduled replications running.

**Issue:** On a very busy system, the get logs operation from SFTP may fail due to the Storage Controller not responding.

Workaround: Obtain the logs from the other controller or when the system is not as busy.

Issue: Unable to modify the remote port address after suspending then aborting a replication.

Workaround: Suspend the replication again, and then retry modifying the remote port address.

**Issue:** Disk Group removal may cause a controller to become unresponsive.

**Workaround:** Reboot the Storage Controller that owns the Disk Group.

**Issue:** When using SHA256 to log into the management controller, the use of upper or mixed case hexadecimal digits will not allow for successful authentication.

Workaround: Use only lowercase hexadecimal digits for SHA256 logins.

**Issue:** An error saying 'File "/logs" not found may appear when obtaining logs due to another activity in progress like a firmware update or another log collection.

**Workaround:** Wait for the activity in progress to complete. Utilize the get progress command for information on the current activity.

Issue: Operational status for failed PSU does not report correct status through SMI-S interface.

**Workaround:** The correct status can be seen from the SMU or the CLI.

Issue: Unable to log in to SMU with valid user credentials after upgrading controller firmware.

Workaround: Log in to the CLI and reset the password for affected users.

**Issue:** One controller fails to reboot after updating controller firmware.

**Workaround:** Restart affected controller from other controller or reseat the affected controller. Check firmware versions and reapply firmware if necessary.

**Issue:** Modifying a user-group role to monitor that has the SMI-S interface included will generate an error stating "An invalid role was specified."

**Workaround:** The monitor role does not support the SMI-S interface. Remove the SMI-S interface to change the user-group role.

**Issue:** Creating a replication set may result in the error "A duplicate name was specified" when attempting to replicate volumes that are named the same as previously renamed volumes that are part of another replication set.

**Workaround:** Create new volumes with unique names, or recreate replication set for volumes that were previously using the volume name.

**Issue:** If a required field was set in the System Settings wizard and then removed but still applied, an error message stating "This field is required" will be seen on all other panels in the wizard when attempting to apply a change.

Workaround: Verify that all required fields in configured settings are filled in correctly.

**Issue:** The SMU may become unresponsive during log collection.

Workaround: Close browser window and open a new SMU session to collect logs.

Issue: After creating a user-group in the SMU, the user may be unable to modify existing user groups.

**Workaround:** Close the panel after any user group operation and reopen it. Or create/delete user groups from the CLI.

**Issue:** Replication state incorrectly shows running when the secondary pool is 100% full.

Workaround: Add storage or free space on secondary pool.

**Issue:** The replication set gets suspended when the pool in the primary array crosses high threshold.

Workaround: Add storage or free space on the primary pool.

**Issue:** LUN Mappings created as "Default" mappings in the SMU or CLI are not visible from Server Manager UI or from System Center Virtual Machine Manager (SCVMM).

Workaround: Use explicit mappings for LUNs that should be visible to Server Manager UI and SCVMM.

**Issue:** When using the SMI-S interface after deleting a storage pool, the physical disks may not be displayed as available to use.

Workaround: Refresh the SMI-S user interface first, and then update the storage provider cache.

Issue: SMI-S client is listing normally hidden snapshots used during replication processes.

**Workaround:** Ignore the internal snapshots seen in the SMI-S client.

**Issue:** One of the disks in a performance tier may appear as part of a Read Cache disk group.

Workaround: Restart the management controller.

**Issue:** In a storage system involved in a replication, one controller may report the location as local and the other controller may report it as remote. This can make the replication options 'Replicate', 'Delete', and 'Resume' unavailable for the replication set.

**Workaround:** Restart both Management Controllers through the SMU or CLI. If the issue is not resolved, then restart both Storage Controllers concurrently.

Issue: Adding a disk-group while a snapshot schedule is running may cause the schedule to report an error.

Workaround: None. After disk-group addition is complete, the schedule will start running without any errors.

**Issue:** On a system being accessed with the Windows SMI-S service utilizing live-cycle indications, firmware update may fail with the message "Firmware update failed. Failed to push bundle to partner controller."

Workaround: Disable indication from Windows system during firmware update.

Issue: Removing all disk-groups in a pool may cause a controller to cease operation.

Workaround: Issue the unfail controller CLI command from the unaffected controller, or power cycle the affected controller

**Issue:** Attempting to abort or resume a replication may produce the error "Error: Command failed" or "Error: The operation cannot be completed because controller failover or recovery is in progress."

**Workaround:** Restart the Storage Controller that owns the primary volume for the replication set. If necessary, subsequently restart the Storage Controller on the other controller in the system.

**Issue:** While running replications, the CLI may report that the "Management Controller is getting data from the Storage Controller. Please Wait..." and the SMU will stop working or not load fresh data.

Workaround: Restart the Management Controller that reported the error.

**Issue:** During failover, a replication is started on a volume group owned by the failed controller. The replication fails with a message indicating the pool is unhealthy, though the pool is shown to be healthy.

Workaround: None required. The replication will restart after failback occurs.

**Issue:** When installing a new license in the SMU, and after selecting license file and clicking **Apply and Close**, the SMU shows the **Uploading the license file** progress dialog box, which remains until refreshing the browser.

Workaround: Refresh the browser.

## **Websites**

**MSA Manuals** 

https://www.hpe.com/info/MSAdocs

**MSA Firmware** 

https://www.hpe.com/storage/MSAFirmware

**MSA Drive Firmware** 

https://www.hpe.com/storage/MSADriveFirmware

**MSA Forum** 

https://www.hpe.com/forum/MSA

**MSA Support Material Access** 

https://support.hpe.com/hpsc/doc/public/display?docLocale=en\_US&docId=emr\_na-c05349541

**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

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