



Take recovery action on storage array status

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Table of Contents

- Take recovery action on storage array status 1
 - View unreadable sectors log 1
 - View NVMe over InfiniBand statistics packages 2
 - Re-enable drive ports..... 2
 - Clear recovery mode 2

Take recovery action on storage array status

View unreadable sectors log

You can save the unreadable sectors log and send the file to technical support for analysis.

About this task

The unreadable sectors log contains detailed records of unreadable sectors caused by drives reporting unrecoverable media errors. Unreadable sectors are detected during normal I/O and during modification operations, such as reconstructions. When unreadable sectors are detected on a storage array, a Needs Attention alert appears for the storage array. The Recovery Guru distinguishes which unreadable sector condition needs attention. Any data contained in an unreadable sector cannot be recovered and should be considered lost.

The unreadable sectors log can store up to 1,000 unreadable sectors. When the unreadable sectors log reaches 1,000 entries, the following conditions apply:

- If new unreadable sectors are detected during reconstruction, the reconstruction fails, and no entry is logged.
- For new unreadable sectors detected during I/O, the I/O fails, and no entry is logged.



These actions include RAID 5 writes and RAID 6 writes that would have succeeded before the overflow.



Possible loss of data — Recovery from unreadable sectors is a complicated procedure that can involve several different methods. Perform this operation only when instructed to do so by technical support.

Steps

1. Select **Support > Support Center > Diagnostics** tab.
2. Select **View/Clear Unreadable Sectors**.
3. To save the unreadable sectors log:
 - a. In the first column of the table, you can either select individual volumes for which you want to save the unreadable sectors log (click the check box next to each volume) or select all volumes (select the check box in the table header).

To find particular volumes, you can sort any of the columns or type characters in the **Filter** box.

- b. Click **Save**.

The file is saved in the Downloads folder for your browser with the name `unreadable-sectors.txt`.

4. If technical support instructs you to clear the unreadable sectors log, perform the following steps:
 - a. In the first column of the table, you can either select individual volumes for which you want to clear the unreadable sectors log (click the check box next to each volume) or select all volumes (select the check box in the table header).
 - b. Click **Clear**, and confirm that you want to perform the operation.

View NVMe over InfiniBand statistics packages

You can view data about the NVMe over InfiniBand connections to your storage array.

About this task

System Manager shows these types of NVMe over InfiniBand statistics. All statistics are read-only and cannot be set.

- **NVMe Controller statistics** — Provides statistics for the NVMe controller, including timeouts and connection failures.
- **NVMe Queue statistics** — Provides statistics for the NVMe queue, including connection requests and command status.

You can view each of these statistics as raw statistics or as baseline statistics. Raw statistics are all of the statistics that have been gathered since the controllers were started. Baseline statistics are point-in-time statistics that have been gathered since you set the baseline time.

You can access NVMe over InfiniBand statistics from the System page (**Settings > System**) or from the Support page. These instructions describe how to access the statistics from the Support page.

Steps

1. Select **Support > Support Center > Diagnostics** tab.
2. Select **View NVMe over InfiniBand Statistics Packages**.
3. To set the baseline, click **Set new baseline**.

Setting the baseline sets a new starting point for the collection of the statistics. The same baseline is used for all NVMe statistics.

Re-enable drive ports

You can indicate to the controller that corrective action has been taken to recover from a mis-wire condition.

Steps

1. Select **Support > Support Center > Diagnostics** tab.
2. Select **Re-enable Drive Ports**, and confirm that you want to perform the operation.

This option appears only when the storage array has disabled drive ports.

The controller re-enables any SAS ports that were disabled when a mis-wire was detected.

Clear recovery mode

After restoring a storage array configuration, use the Clear Recovery Mode operation to resume I/O on the storage array and return it to normal operations.

Before you begin

- If you want to return the storage array to a previous configuration, you must restore the configuration from

the backup before clearing recovery mode.

- You must perform validation checks or check with technical support to make sure that the restore was successful. After determining that the restore was successful, recovery mode can be cleared.

About this task

The storage array contains a configuration database that includes a record of its logical configuration (pools, volume groups, volumes, and so on). If you intentionally clear the storage array configuration or if the configuration database gets corrupted, the storage array enters recovery mode. Recovery mode stops I/O and freezes the configuration database, which gives you time to do one of the following:

- Restore the configuration from the automatic backup that is stored in the controller's flash devices. You must contact technical support to do this.
- Restore the configuration from a previous Save Configuration Database operation. Save Configuration Database operations are performed through the command line interface (CLI).
- Reconfigure the storage array from scratch.

After the storage array configuration has been restored or redefined and you have verified that all is well, you must manually clear recovery mode.



You cannot cancel the Clear Recovery Mode operation after it starts. Clearing recovery mode can take a long time. Perform this operation only when instructed to do so by technical support.

Steps

1. Select **Support** > **Support Center** > **Diagnostics** tab.
2. Select **Clear Recovery Mode**, and confirm that you want to perform this operation.

This option appears only if the storage array is in recovery mode.

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