SFA OS™

Pausing Rebuilds During Host I/O May Result in Bad Block Errors

Issue Summary and Resolution
In SFA OS 2.3.1.3 and earlier, rebuild jobs that are paused and later resumed may not properly check for new writes that took place above the rebuild fence while the background job was paused. If host writes are active to a pool where rebuild jobs are running, this can result in bad block errors on that pool. For example:

   LOG_RAID_UNCORRECTED_BAD_BLOCK

This issue is resolved in SFA OS 2.2.7 for the SFA10K family and in SFA OS 2.3.1.5 and higher for SFA7700 and SFA12K platforms.

Affected Systems
All models of the SFA7700 (including the ES7K and GS7K), SFA10K, and SFA12K storage arrays running SFA OS versions 2.0.0 through 2.3.1.3 may experience this issue.

Root Cause
New host writes to a pool with active rebuild jobs are normally flagged for inclusion in the rebuild. However, under certain conditions, paused rebuild jobs were not being detected properly, which resulted in host writes not being flagged during the period when the jobs were paused. As a result, when the rebuild jobs were resumed, they did not detect the presence of new writes and the newly written stripes were not rebuilt.
Resolution
All SFA7700 and SFA12K storage arrays should be upgraded to SFA OS 2.3.1.5 or higher. All SFA10K arrays should be upgraded to SFA OS 2.2.7.

Workaround
SFA7700 and SFA12K customers who have not yet upgraded to SFA OS 2.3.1.5, and SFA10K customers who have not yet installed SFA OS 2.2.7, should *never pause a rebuild job when host I/O is active* to the affected pool. If it is necessary to pause a rebuild, quiesce host I/O to the pool first, then pause the job.

Contacting DDN Technical Support
Please contact DDN Technical Support at any time if you have questions or require assistance. Support can be reached by phone, by email, or on the web as listed below.

Web
*DDN Community Support Portal*  https://community.ddn.com/login
*Portal Assistance*  webportal.support@ddn.com

Telephone
*DDN Support Worldwide Directory*  http://www.ddn.com/support/contact-support

Email
*Support Email*  support@ddn.com

Bulletins
*Support Bulletins*  http://www.ddn.com/support/technical-support-bulletins
*Bulletin Subscription Requests*  support-tsb@ddn.com