

File Size Reporting Bug Can Put EXAScaler Hot Pools Data at Risk



ALERT! A file size handling bug in the Lustre kernel can put data at risk in EXAScaler files using the hot pools feature.

Issue Summary

A bug exists in the file-level replication (FLR) code related to file size handling in the Lustre kernel. This code is used by the hot pools feature of EXAScaler.

When the bug is encountered, mirrored files created by FLR may incorrectly report a stale file size. Applications that use file size to determine where to write data can write data to the incorrect location, resulting in data corruption or loss for the affected file. The error occurs only when three or more FLR mirrors are created, then one is removed. Stale file size information for the removed file is incorrectly retained on the metadata server. When file size for the mirrored files is next changed (for example, by a write or truncate operation), the stale file size is incorrectly recorded instead of the new value.

ALERT! Data in the affected file may become corrupted or lost.

EXAScaler is affected by this bug only if *both* the following conditions are true:

- Hot pools are in use.
- A file is striped across both hot and cold pools.

When this occurs, EXAScaler hot pools may create three FLR copies of the file, then remove the third copy as part of a normal purge operation. This action triggers the FLR bug.

ALERT! If you are running an affected version of EXAScaler and you have reason to believe you may be affected by this bug, ***please contact DDN Support immediately.***

Affected Products

This issue affects EXAScaler versions 5.1.0 through 5.2.2.

Resolution

The issue is resolved in EXAScaler version 5.2.3 and higher. Customers are advised to upgrade the latest version of EXAScaler.

ALERT! DDN Support can provide a data scanning script to determine whether or not files have been affected by the FLR file size reporting bug. If you believe you are affected by this issue, **please contact DDN Support to obtain this script.**

Contacting DDN Technical Support

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

Web

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

Email

Support Email support@ddn.com

Telephone

DDN Support Worldwide Directory <https://www.ddn.com/support/global-services-overview/>

Bulletins & Notices

Support Bulletins <http://www.ddn.com/support/technical-support-bulletins>
End-of-Life Notices <http://www.ddn.com/support/end-of-life-notices>
Release Notes <https://community.ddn.com/login>
TSB Subscription Requests support-tsb@ddn.com