

Lustre 2.5 Scope Statement

Introduction

The following Scope Statement applies to the 2.5 Release project. Lustre feature releases follow a release train model, with feature releases targeted every 6 months.

Problem statement

Lustre 2.5 is planned to be a regular feature release as a follow-on to Lustre 2.4 which was made generally available (GA) on 2013-05-31. There are several new features, improvements, and bug fixes that have been, or are currently being developed for landing to the Lustre Master branch. Lustre 2.5 will use the train model approach where only those features landed prior to the Feature Freeze Date (2013-07-31) will be included in the release.

Project goals

In addition to the goals listed in the Problem Statement, the goals listed below are being added for the Lustre 2.5 release:

- The stability and performance levels of Lustre Master will meet or surpass that of the 2.4 release, based on Simulated Workload (SWL) (will run for a minimum of 48 hours) and Hyperion performance testing results (release over release)

In Scope

Since the Lustre Feature releases are being managed using the train model, there are often many more proposed features than will make it into any one release. Below is a listing of all known features that are possible candidates for inclusion in 2.5 given the timing of the 2.5 feature freeze date.

Proposed Features & Enhancements (Developing Organization)

The following are Candidate Features for Lustre 2.5:

- LFSCK Phase II (Intel)
 - [LU-2914](#) - Separate LFSCK code from MDD layer to a new LFSCK layer
 - [LU-1267](#) - LFSCK II
 - [LU-2915](#) - LFSCK 1.5 technical debts
 - [LU-3335](#) - LFSCK II: MDT-OST OST local consistency checking
- DNE Phase II (Intel)
 - [LU-2430](#) - Migration Tool for DNE
- HSM (CEA, Intel)
 - [LU-2482](#) - HSM Release
 - [LU-2061](#) - HSM Coordinator
 - [LU-2062](#) - HSM Posix Copy Tool
 - [LU-3362](#) - HSM Disaster Recovery Support
 - [LU-3363](#) - HSM Import Support
 - [LU-3254](#) - Exclusive Open
- Data on MDS (Intel)
- [LU-2145](#) - The llog_origin_handle_create operation failed with -2
 - [LU-2611](#) - Unified Target
 - [LU-3467](#) - Unified request handler on OST
- [LU-2934](#) - LNET Router Priorities (Intel, Fujitsu)
- [LU-2950](#) - Port LNET routes_config change done by Fujitsu in latest lustre (Intel, Fujitsu)
- [LU-2924](#) - shrink ldlm_poold workload (Intel, Fujitsu)
- [LU-3221](#) - calling set_fs(KERNEL_DS) may break copy_from_user() on SPARC (Intel, Fujitsu)
- [LU-2743](#) - Errno Translation (Intel, Fujitsu)
- [LU-1812](#) - 3.6/FC18 Server Patches (Intel)
- [LU-549](#) - Packaged xattr (Xyratex)
- [LU-3155](#) - Permanent parameters with lctl set_param -P (Xyratex)
- [LU-2584](#) - End-to-End Data Integrity with T10 (Xyratex)
- [LU-1575](#) - Add flock policy support (Xyratex)
- 2.4 Known Issues
 - [LU-3430](#) - SWL failure: (hash.c:546:cfs_hash_bd_del_locked()) ASSERTION(bd->bd_bucket->hsb_count > 0) failed:
 - [LU-3415](#) - After upgrade server from 1.8.9 to 2.4, hit (qsd_entry.c:198:qsd_refresh_usage()) ASSERTION(qqi->qqi_acct_obj) failed
 - [LU-3420](#) - OI scrubbing could not automatically engage after restoring a secondary MDT from a (file-level) backup
 - [LU-3421](#) - (ost_handler.c:1762:ost_blocking_ast()) Error -2 syncing data on lock cancel causes first ENOSPC client issues then MDS server locks up
 - [LU-3305](#) - Quotas affect Metadata performance
- Additional Enhancements/Bug fixes targeted for 2.5 can be found here: <https://jira.hpdd.intel.com/issues/?filter=10472>

Bug Blocker List:

2.5 Bug Blocker List: <https://jira.hpdd.intel.com/issues/?filter=10474>

Out of Scope

The following items are considered out of scope for the Lustre 2.5 release:

- The full Replication Feature will not be available in 2.5

- The full Data on MDS Feature will not be available in 2.5

Kernel Versions/OFED Versions/e2fsprogs Versions:

Upgrades submitted after the Feature Freeze date will be considered on a case by case basis

Server Kernel Version:

2.6.32-358.6.2.el6 (RHEL6.4)

Client Kernel Versions:

2.6.32-358.6.2.el6 (RHEL6.4)

SLES11 SP3

FC/18

OFED Versions:

o2ibld - OFED 1.5.4

e2fsprogs Version:

1.42.7.wc1

Project Constraints

Project Constraints are boundaries that have been defined which affect how the project can be delivered. Constraints are non-negotiable elements of the project. The identified constraints for the Lustre 2.5 release are:

- Test Framework changes need to be made prior to the full HSM solution being tested

Key Deliverables and Milestones

Baseline Test Plan: 2013-05-31

Feature Freeze: 2013-07-31

Code Freeze: 2013-09-30

2.5 Release GA: 2013-10-31