Lustre 2.4 Scope Statement

Introduction

The following Scope Statement applies to the 2.4 Release project. Lustre feature releases follow a release train model, with feature releases targeted every 6 months. For the 2.4 release, the code freeze date has been shifted from a Dec 31, 2012 date to a January 31st, 2013 date in a one-time date adjustment to shift away from freeze dates falling near the Holidays.

Problem statement

Lustre 2.4 is planned to be a regular feature release as a follow-on to Lustre 2.3 which was made generally available (GA) on 2012-10-22. 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 2.4 will use the train model approach where only those features landed prior to the Feature Freeze Date (2013-01-31) 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 2.4 release:

- Lustre 2.4 GA will pass the entire Lustre test suite prior to GA announcement
- The stability and performance levels of Lustre Master will meet or surpass that of the 2.3 release, based on 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 being targeted for completion within the required timing of the 2.4 feature freeze date. There are no features in this current release that are being considered as blockers for the release (able to hold up or extend the feature freeze date to ensure inclusion).

Features & Enhancements (Developing Organization)

- Adding support for SLES11-SP2 clients
- Adding support for Fedora 18 clients

The following are new Features for Lustre 2.4:

- LU-398 Network Request Scheduler (Xyratex)
- LU-1431 4MB RPC (Xyratex)
- LU-718 FID on OST Infrastructure (Intel HPDD)
- LU-1434 Update Wireshark support for LNET and Lustre (Intel HPDD)
- LU-744 Client Performance Improvements (Intel HPDD)
- LU-1876 HSM Layout Lock (CEA & Intel HPDD))
- LU-1866 FID-in-Dirent, linkEA (LFSCK Phase 1.5, Intel HPDD)
- LU-1187 Remote Directories (DNE Phase I, Intel HPDD)
- LU-1711 Server Stack (Intel HPDD)
- LU-1302 Object Storage Device (OSD) - LLOG (Intel HPDD)
- LU-1303 Layered Object Device/Object Storage Proxy (LOD/OSP) (Intel HPDD)
- LU-1304 OSD-MDT (Intel HPDD)
- LU-1842 Quota Enforcement (Intel HPDD)
- LU-1301 MGS over OSD (Intel HPDD)
- LU-2034 Changelog (Intel HPDD)
- LU-1581 ZFS OSD Utilities (Intel HPDD)
- LU-2466 LNet Networks Hashing (Intel HPDD)
- LU-2467 Ability to Disable Pinging (Intel HPDD)
- LU-1455 FID on OST (Intel HPDD)
- LU-941 HSM: Manage Dirty Flag for HSM (CEA)
- LU-827 HSM: Data Version per File (CEA)
- LU-1338 HSM: Flags (CEA)
- LU-2062 HSM: POSIX Copy Tool (CEA)
- LU-2016 HSM: Layout swapping MDT part (CEA)

Bug Blocker List:

2.4 Bug Blocker List: http://jira.whamcloud.com/secure/IssueNavigator.jspa?mode=hide&requestId=10292

Out of Scope

The following items are considered out of scope for the Lustre 2.4 release:

- RHEL5 Client support
- SLES11-SP1 Client support

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 2.4 release are:

- All testing (feature and functional) must be executed and pass on ldiskfs and ZFS prior to GA announcement

Project Assumptions

The following are assumed to be true for the Lustre 2.4 release:

- FC/18 will be available by the Feature Freeze date in order for it to be fully tested and supported.
- There will be enough testing hardware and human resources available to fully test both ldiskfs and ZFS and back-end stores

Key Deliverables and Milestones

Baseline Test Plan: 2012-10-31

Feature Freeze: 2013-01-31

Code Freeze: 2013-03-31

2.4 Release GA: 2013-04-30