Lustre* Releases

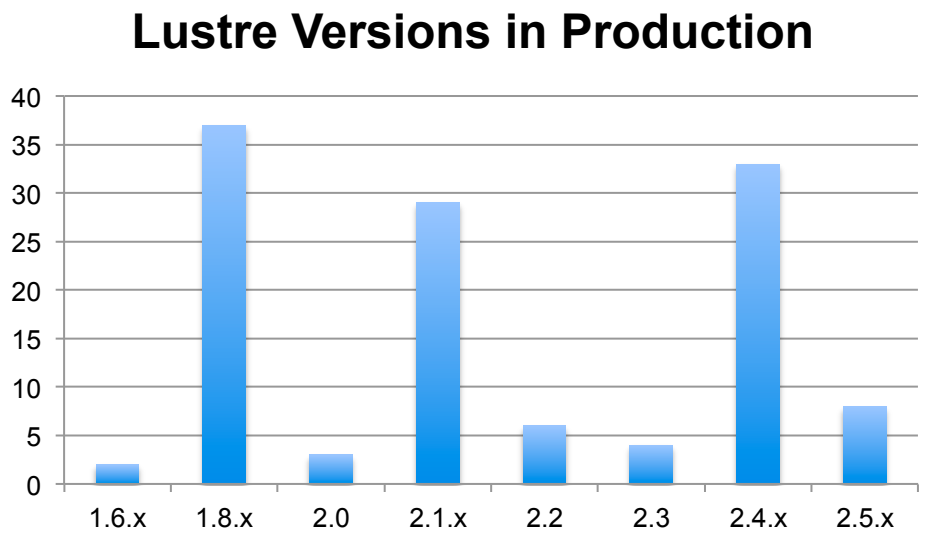
Peter Jones

Lustre Support and Releases Manager

Lustre* Release Trends

Lustre 2.4.x has been most common choice for new deployments

Recent shift towards Lustre 2.5.x



Source: OpenSFS Survey March 2014
76 Respondents could make multiple selections

*Other names and brands may be claimed as the property of others.

Lustre* 2.1.x

Lustre 2.1.0 declared GA Oct 2011

RHEL 6.x servers and large LUNs the main attraction

Still a large number of sites in production on 2.1.x but many of larger sites have now upgraded

- NASA/CEA/LLNL all upgraded to more current releases

Formerly maintenance release stream

- Latest release 2.1.6 June 2013

Lustre* 2.4.x

Lustre 2.4.0 declared GA May 2013

Features include DNE Remote Directories (LU-1187); Network Request Scheduler (LU-398) and ZFS support (LU-1305)

Most active codeline over past year

- NASA/CEA/LLNL/ORNL all running in production
- DDN, Bull and others using for deployments

Formerly maintenance release stream

- Latest release 2.4.3 Mar 2014

Lustre* 2.5.x

Lustre 2.5.0 declared GA Oct 2013

HSM (LU-3608) is the primary feature

- Manages data transfer between different storage types

Indications are that this codeline will be widely adopted

- Many upgrades underway

Present maintenance release stream

- Latest release 2.5.3 Sept 2014
- Lustre 2.5.4 targeted for Q4 2014

Lustre* 2.6

Declared GA July 2014

Several new features

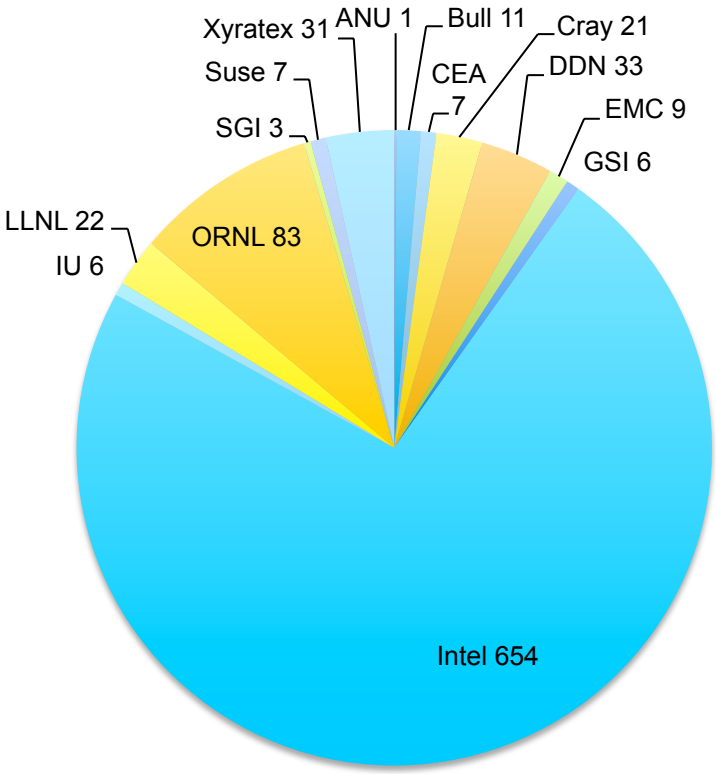
- LFSCK MDT-OST Consistency (LU-1267)
- Single client IO performance (LU-3321)
- DNE Striped directories (LU-3531) preview

Much groundwork to support newer kernels

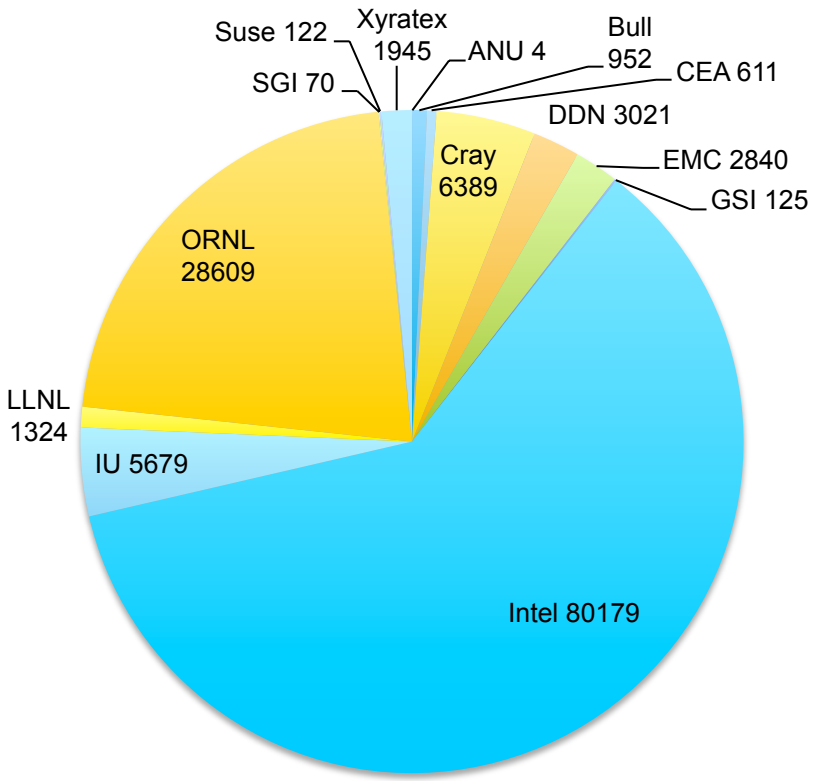
Feature release only; no maintenance releases planned

Lustre* 2.6 – Code Contributions

Commits between 2.5.50 and 2.6 GA by Organization



Number of Commits



Lines of Code changed

*Other names and brands may be claimed as the property of others.

Lustre* Version Statistics

Version	Commits	LOC	Developers	Organizations
1.8.0	997	291K	41	1
2.1.0	752	92K	55	7
2.2.0	329	58K	42	10
2.3.0	586	87K	52	13
2.4.0	1123	348K	69	19
2.5.0	471	102K	70	15
2.6.0	894	132K	76	14

Lustre* 2.7

Targeted GA Feb 2015

- Feature freeze Oct 31st 2014

Several new features targeted for this release

- UID Mapping (LU-3527)
- LFSCK MDT-MDT Consistency (LU-4788)
- Dynamic LNET Configuration (LU-2456)

Will add RHEL7 client support

- Likely SLES12 client support too when GA confirmed

Interop and upgrades supported with 2.6 and 2.5.x releases

Feature release only; no maintenance releases planned

Upstream Lustre* Client

First appeared in staging area in 3.11 kernel

Client is slightly ahead of a 2.4.0 client in functionality

Some sites report on mailing lists to be running in production

Linux distribution releases now contain in-kernel Lustre client

- Ubuntu 14.04 and SLES12 do; RHEL 7 just missed out (3.10)
- Poses some logistical challenges (LU-5628)

Working with upstream community to get Lustre out of staging

- Remove typedefs (LU-5478)
- Deprecate proc/fs/lustre (LU-5030)
- Aiming to complete much of this work for Lustre 2.7

Lustre* Release Testing

Well-established release validation practices

- Automated functional regression tests across test matrix
- SWL runs on Hyperion
- Execution of feature test plans

Continuing to evolve testing practices

- Fault injection
- Aged file system testing
- Soak testing
- Static code analysis tools

Lustre* Release Documentation

Latest version of user documentation dynamically available to download

- http://lustre.opensfs.org/documentation/

See Richard Henwood's recent LUG presentation for details on how to contribute

- http://cdn.opensfs.org/wp-content/uploads/2013/05/Henwood_manual_LUG13_FINAL_v2.pdf

If you know of gaps then please open an LUDOC ticket

- If you have not got time to work out the correct format to submit then unformatted text will provide a starting point for someone else to complete

Internals documention also being improved (LU-1892)

OpenSFS Lustre* Working Group

Combines previous TWG and CDWG

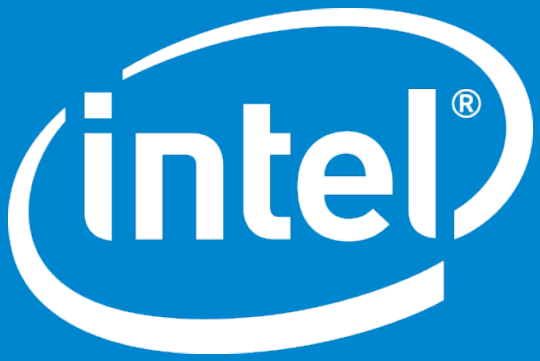
- Chris Morrone of LLNL is lead

Single forum for all Lustre development matters

- Oversees entire Lustre development cycle
- Maintains the roadmap
- Plans major releases
- Collects requirements for future Lustre features
- Sets priorities for test matrix

For more information visit the wiki

http://wiki.opensfs.org/Lustre_Working_Group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