



Community Release Update

LAD 2018

Peter Jones, Whamcloud
OpenSFS Lustre Working Group

Lustre on the Move

- Lustre Engineering team moved from Intel to Whamcloud
 - Whamcloud is an autonomous division of DDN
 - <http://opensfs.org/press-releases/opensfs-congratulates-ddn-on-acquiring-intels-lustre-file-system-capability/>
 - OpenSFS hosting webinar on this topic on Oct 2nd
 - <http://lists.lustre.org/pipermail/lustre-discuss-lustre.org/2018-September/015926.html>
- Development and test infrastructure relocated as a result
 - Issue tracking <https://jira.whamcloud.com>
 - Patch reviews <https://review.whamcloud.com>
 - Download site <http://downloads.whamcloud.com>
 - Wiki <https://wiki.whamcloud.com>

OpenSFS Lustre Working Group

Lead by Peter Jones (Whamcloud) and Dustin Leverman (ORNL)

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

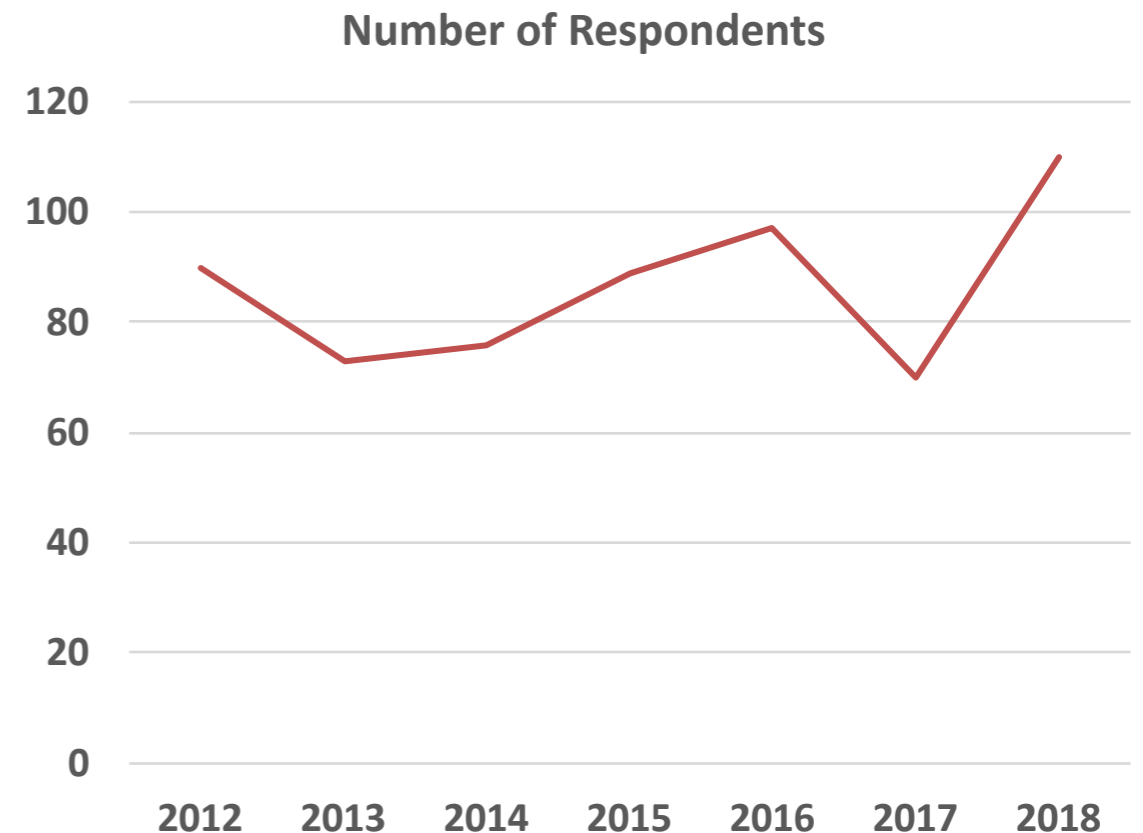
All welcome to attend and/or join the mailing list

For more information visit the wiki

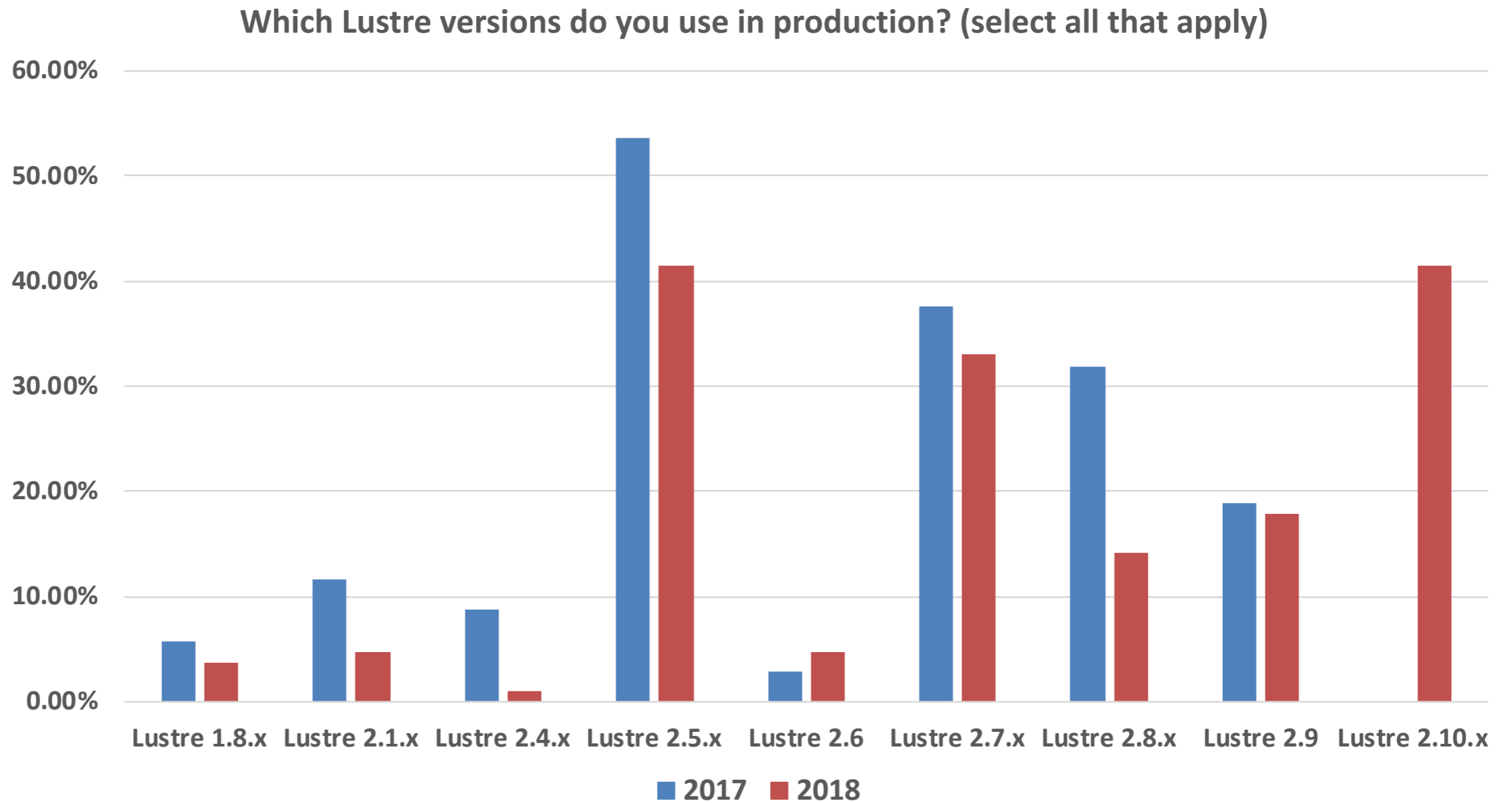
[http://wiki.opensfs.org/Lustre Working Group](http://wiki.opensfs.org/Lustre_Working_Group)

Community Survey

- Has been running for 7 years
- LWG devises questions
- Useful for tracking trends in Lustre usage
- Spike in respondents compared to 2017 survey (70 to 110)
- Full details available at [http://wiki.opensfs.org/Lustre Community Survey](http://wiki.opensfs.org/Lustre_Community_Survey)

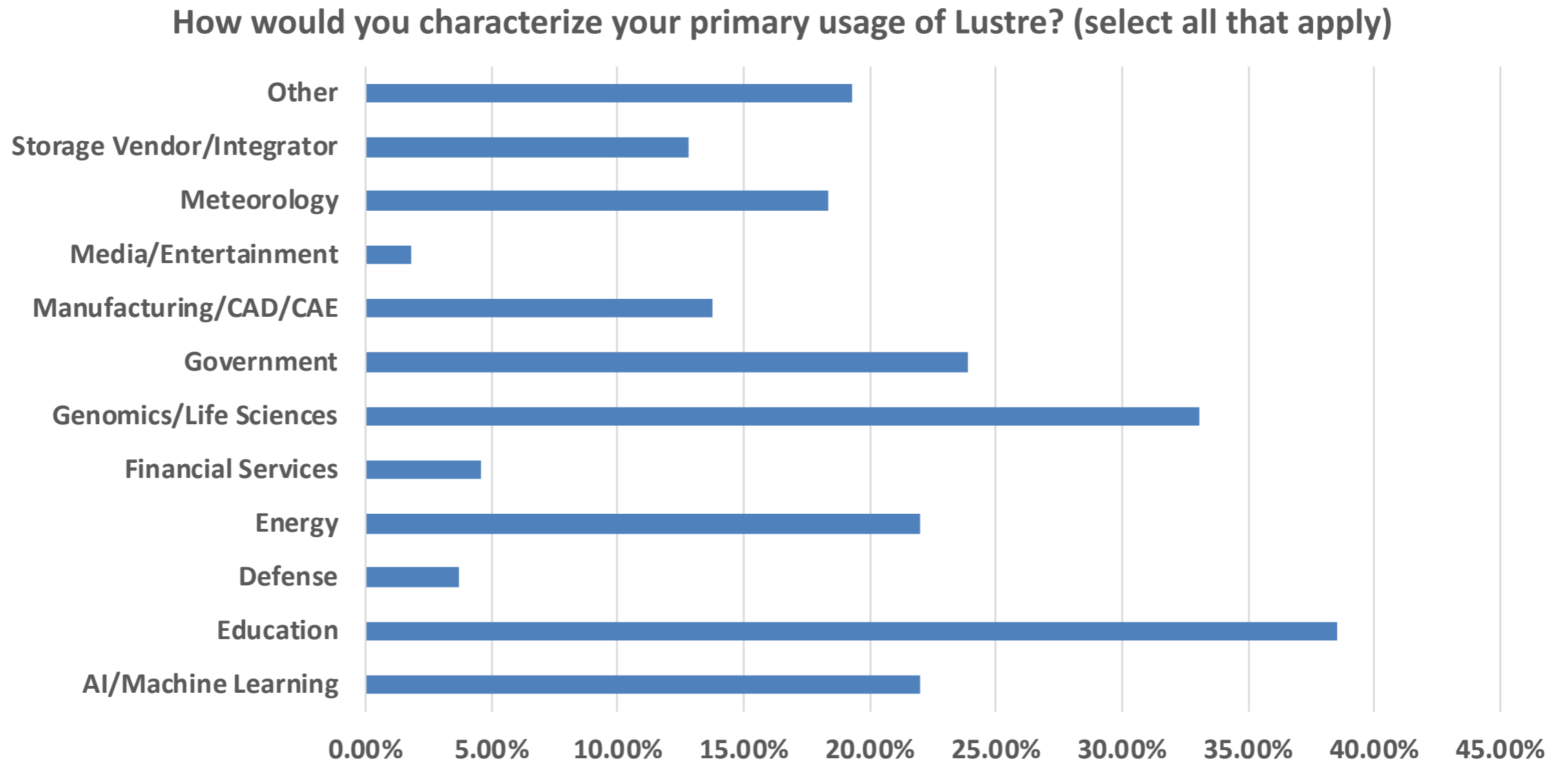


Community Survey - Versions



- Lustre 2.10.x and 2.5.x most commonly-used version in production

Community Survey - Usage



- AI/Machine Learning much higher than anticipated
- Need to refine categories based on feedback in Other

Lustre LTS Releases

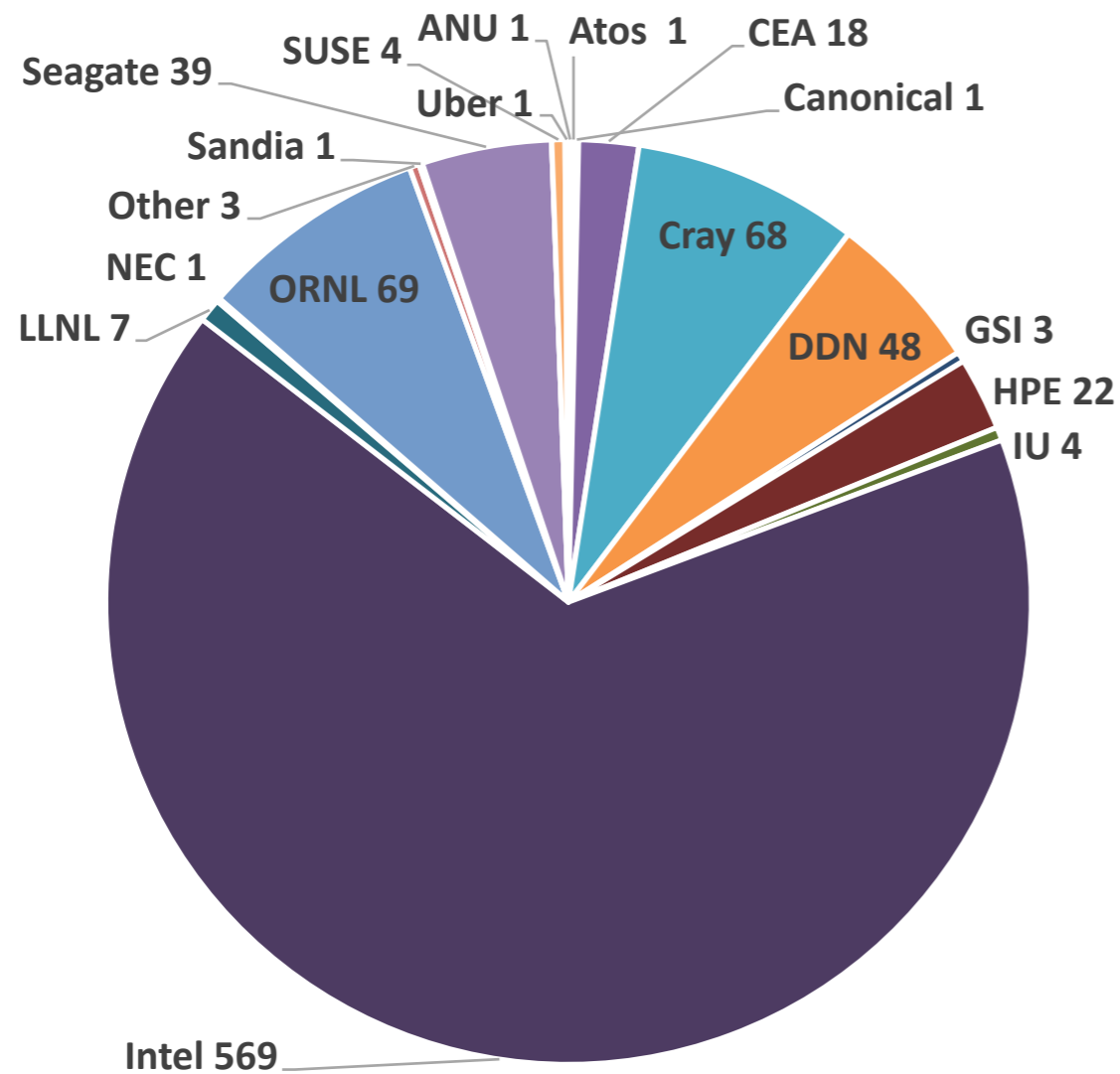
- Lustre 2.10.0 went GA July 2017
 - Lustre 2.10.1 Oct 2017
 - Lustre 2.10.2 Dec 2017
 - Lustre 2.10.3 Jan 2018
 - Lustre 2.10.4 May 2018 (introduced RHEL 7.5 support)
 - Lustre 2.10.5 Aug 2018 (first release since relocation)
- LWG will decide baseline/timing of next LTS stream Q4 2018

Lustre 2.11

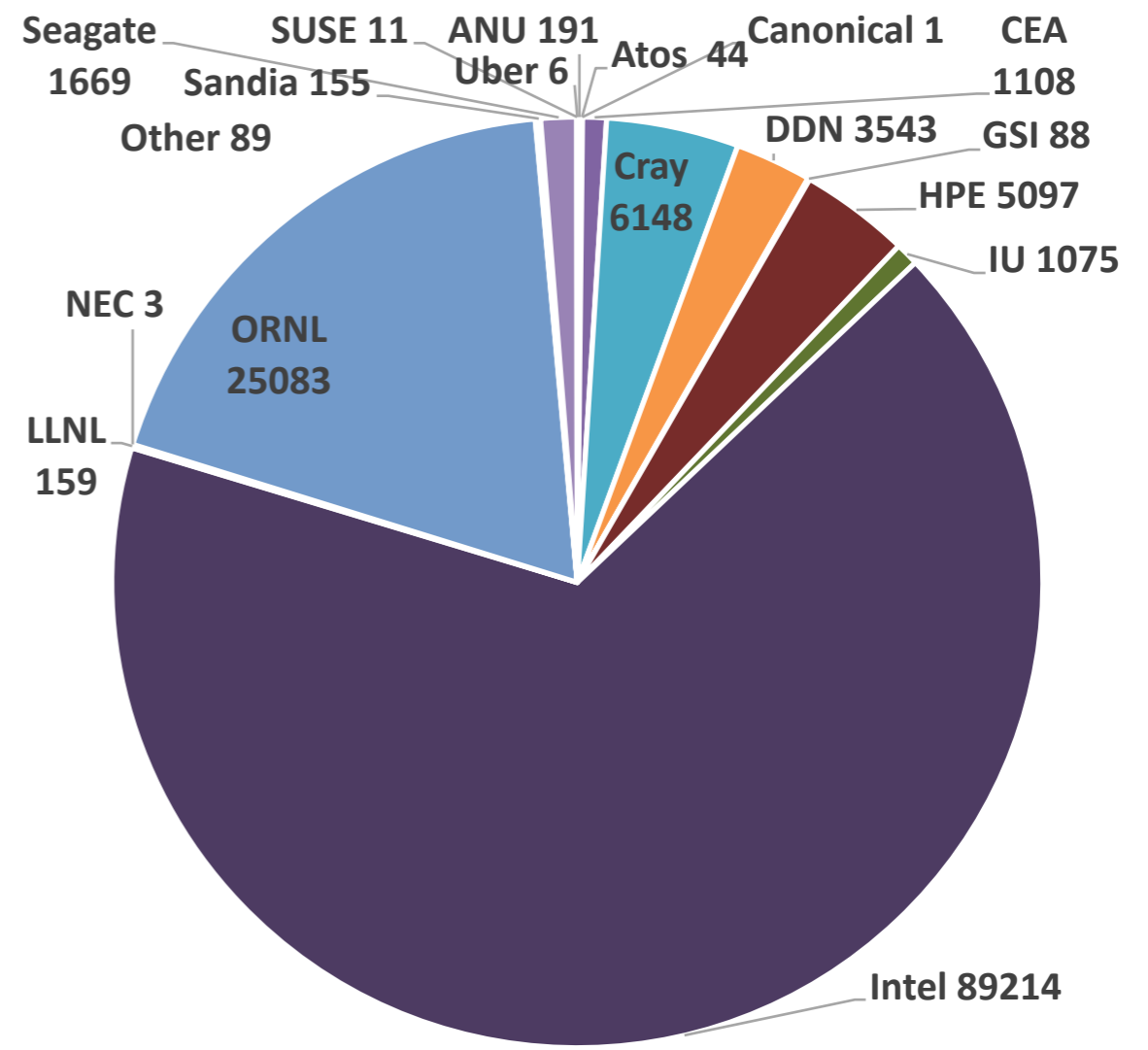
- GA April 3rd 2018 http://wiki.lustre.org/Release_2.11.0
- Supports
 - RHEL 7.4 servers
 - RHEL 7.4 / SLES12 SP3 /Ubuntu 16.04 clients
 - Interop/upgrades from Lustre 2.10.x servers/clients
- New features included in this release
 - Data on MDT (LU-3285)
 - FLR Delayed Resync (LU-9771)
 - Lock-ahead (LU-6179)
- Enhancements to existing features
 - Lustre Audit with Changelogs (LU-9727)
 - OI Scrub for ZFS (LU-7585)

Lustre 2.11 - Contributions

Number of Commits



Lines of Code Changed

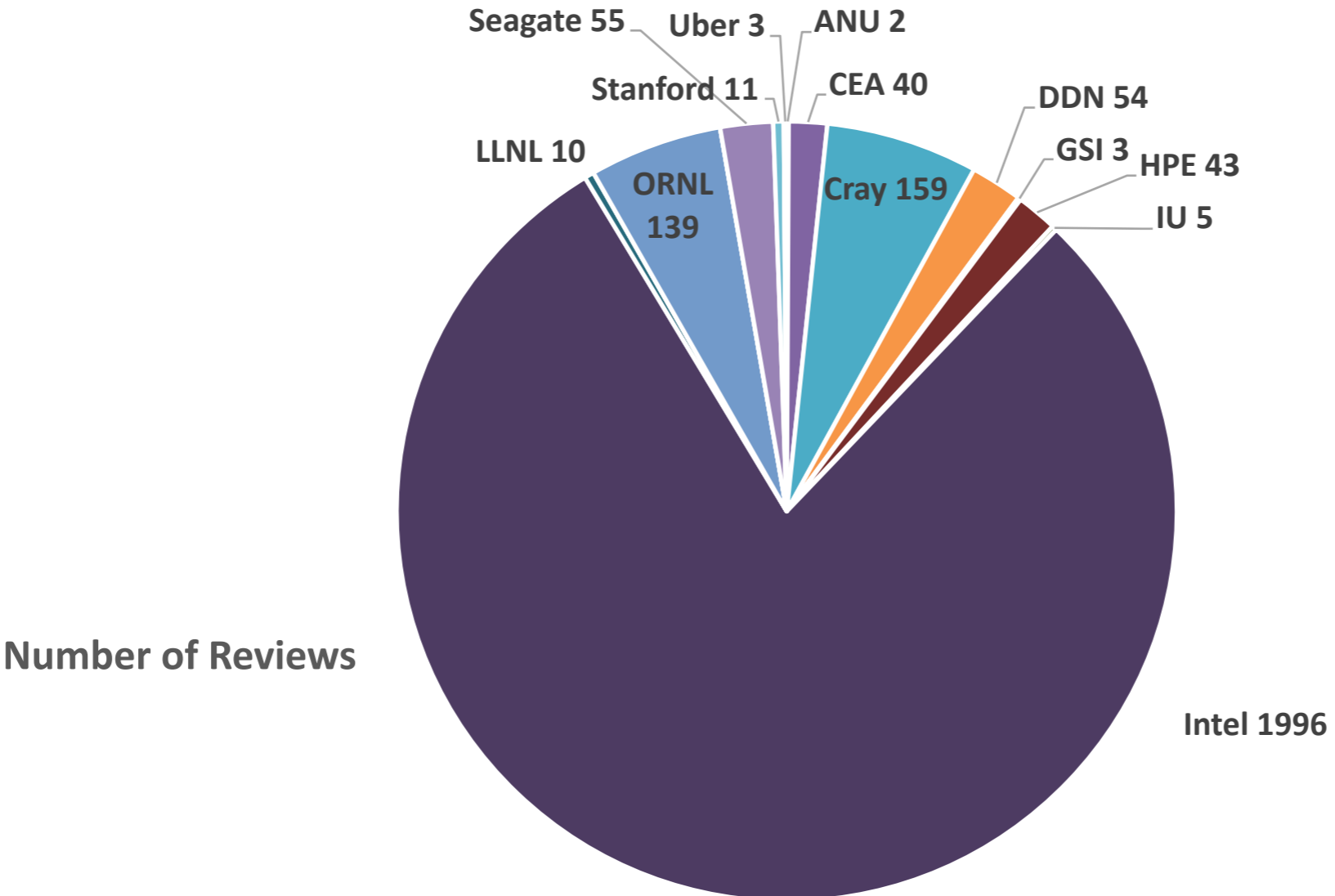


Statistics courtesy of Dustin Leverman (ORNL)

Source: <http://git.whamcloud.com/fs/lustre-release.git/shortlog/refs/heads/master>

Aggregated data by organization between 2.10.50 and 2.11.0 tags

Lustre 2.11 - Reviews



Source: <http://git.whamcloud.com/fs/lustre-release.git/shortlog/refs/heads/master>

Aggregated data by organization between 2.10.50 and 2.11.0 tags

Statistics courtesy of Dustin Leverman (ORNL)



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	885	147K	76	14
2.7.0	742	201K	65	15
2.8.0	995	147K	92	17
2.9.0	737	74K	121	16
2.10.0	732	108K	85	14
2.11.0	860	134K	87	18

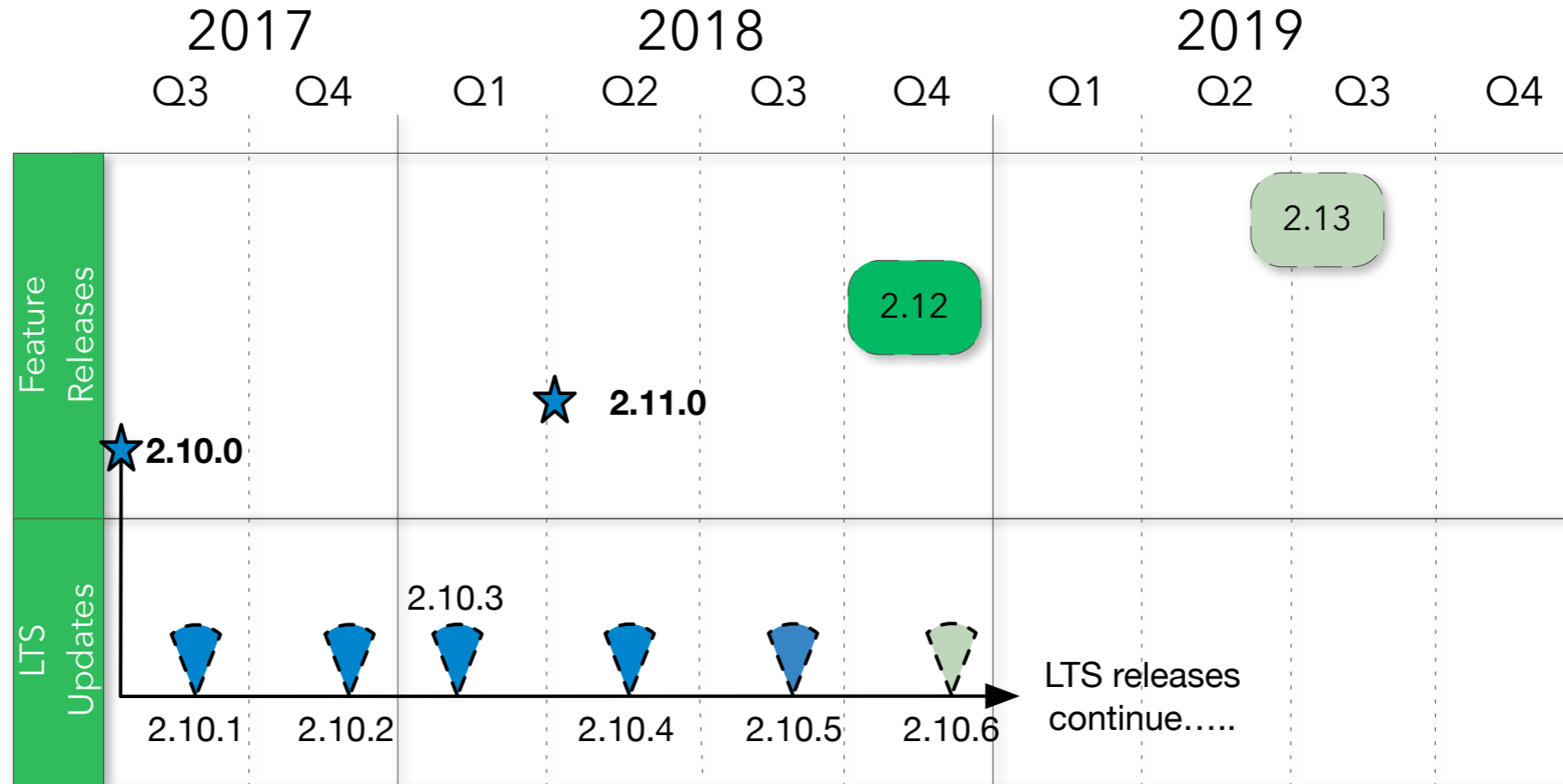
Statistics courtesy of Chris Morrone (LLNL)/ Dustin Leverman (ORNL)

Source: <http://git.whamcloud.com/fs/lustre-release.git>

Lustre 2.12

- Targeted for October 2018 release
 - Feature complete and in stabilization period
- Will support
 - RHEL 7.5 servers/clients
 - SLES12 SP3 clients
 - Ubuntu 18.04 clients
- Interop/upgrades from latest Lustre 2.10.x and 2.11.x servers/clients
- Several features targeted for this release
 - DNE Directory Restriping (LU-4684) **CONFIRMED**
 - LNet Network Health (LU-9120) **CONFIRMED**
 - Lazy Size on MDT (LU-9538) **CONFIRMED**
- http://wiki.lustre.org/Release_2.12.0

Lustre Community Roadmap



LEGEND:



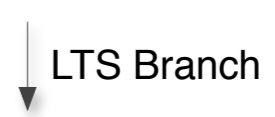
Expected Timeline



Timeline TBD



Completed



LTS Branch

2.10

- ZFS Snapshots
- Multi-rail LNet
- Progressive File Layouts
- Project Quotas

2.11

- Data on MDT
- FLR Delayed Resync
- Lock Ahead

2.12

- Lazy Size on MDT
- LNet Health
- DNE Dir Restripping

2.13

- FLR Erasure Coding
- Persistent Client Cache

* Estimates are not commitments and are provided for informational purposes only

* Fuller details of features in development are available at <http://wiki.lustre.org/Projects>

IML 4.x

- IML 4.0 GA Oct 2017; latest maintenance release 4.0.8
- <https://github.com/whamcloud/integrated-manager-for-lustre/releases>
- Open source releases of IML
 - Provides intuitive browser-based administration of Lustre filesystems
 - Distributed under an MIT license
 - Compatible with Lustre 2.10.x
- Possible for sites running Intel EE 2.x and 3.x to upgrade

Lustre Release Documentation

- Latest version of manual dynamically available to download
 - <http://lustre.org/documentation/>
 - Also links for how to contribute
- 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
- Large amount of content exists on lustre.org
 - [http://wiki.lustre.org/Category:Lustre Systems Administration](http://wiki.lustre.org/Category:Lustre_Systems_Administration)
 - Lustre Internals content being refreshed

Summary

- Hugely productive year in terms of roadmap advancement
- Lustre 2.11 is GA; Lustre 2.12 in final stages
- Lustre 2.10.5 is GA; 2.10.6 is targeted for Q4
- IML 4.0.8 is GA; IML 4.1 targeted for Q4
- Plenty of options to contribute to Lustre/IML

Thank you

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