



Community Release Update

LUG 2016

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OpenSFS Lustre Working Group

OpenSFS Lustre* Working Group

Lead by Peter Jones (Intel) and Sarp Oral (ORNL)

- Took over from Chris Morrone Nov 2015

Single forum for all Lustre development matters

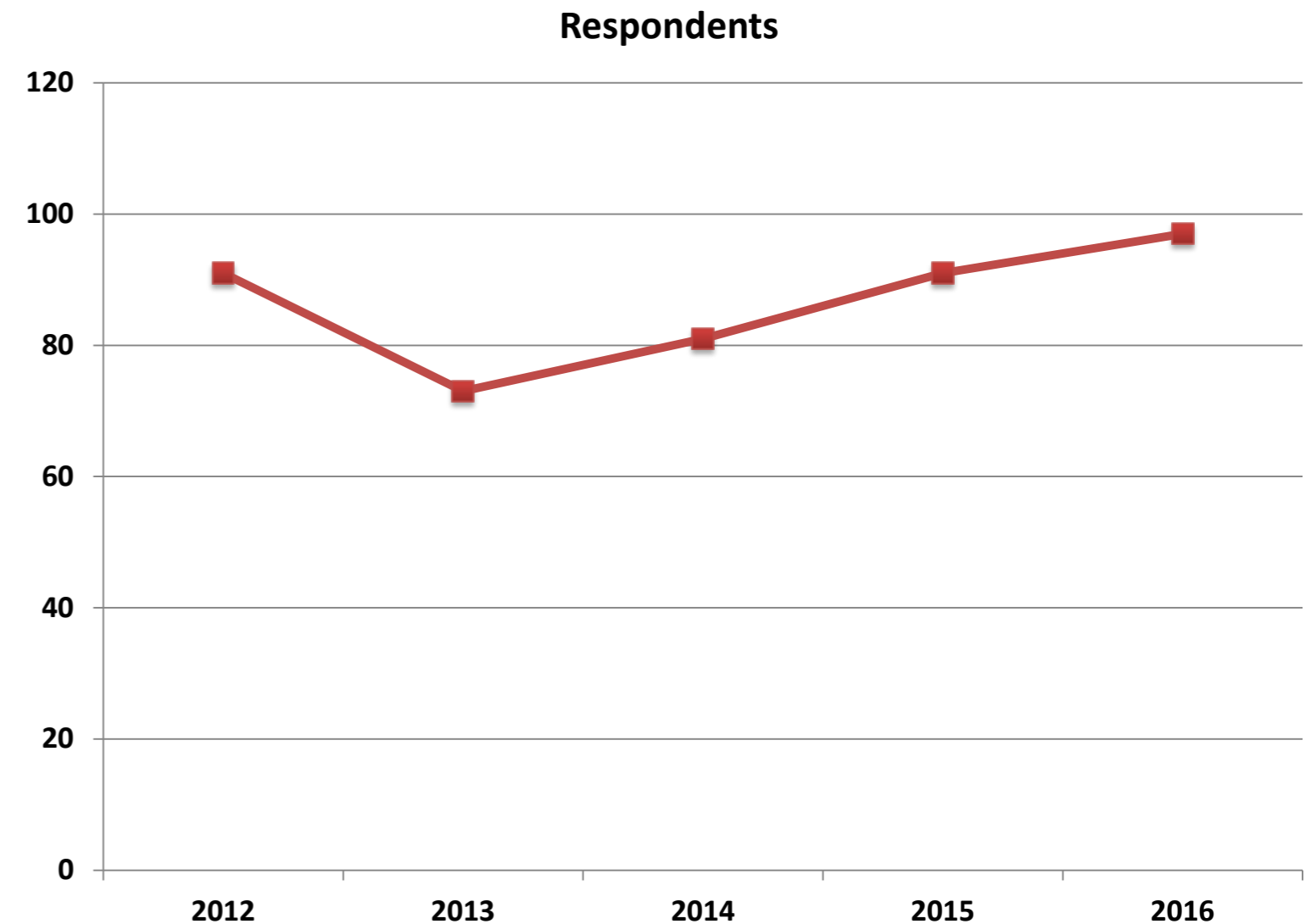
- Oversees entire Lustre development cycle
- Maintains the roadmap
- Plans major releases
- Collects requirements for future Lustre features
- Sets priorities for test matrix

For more information visit the wiki

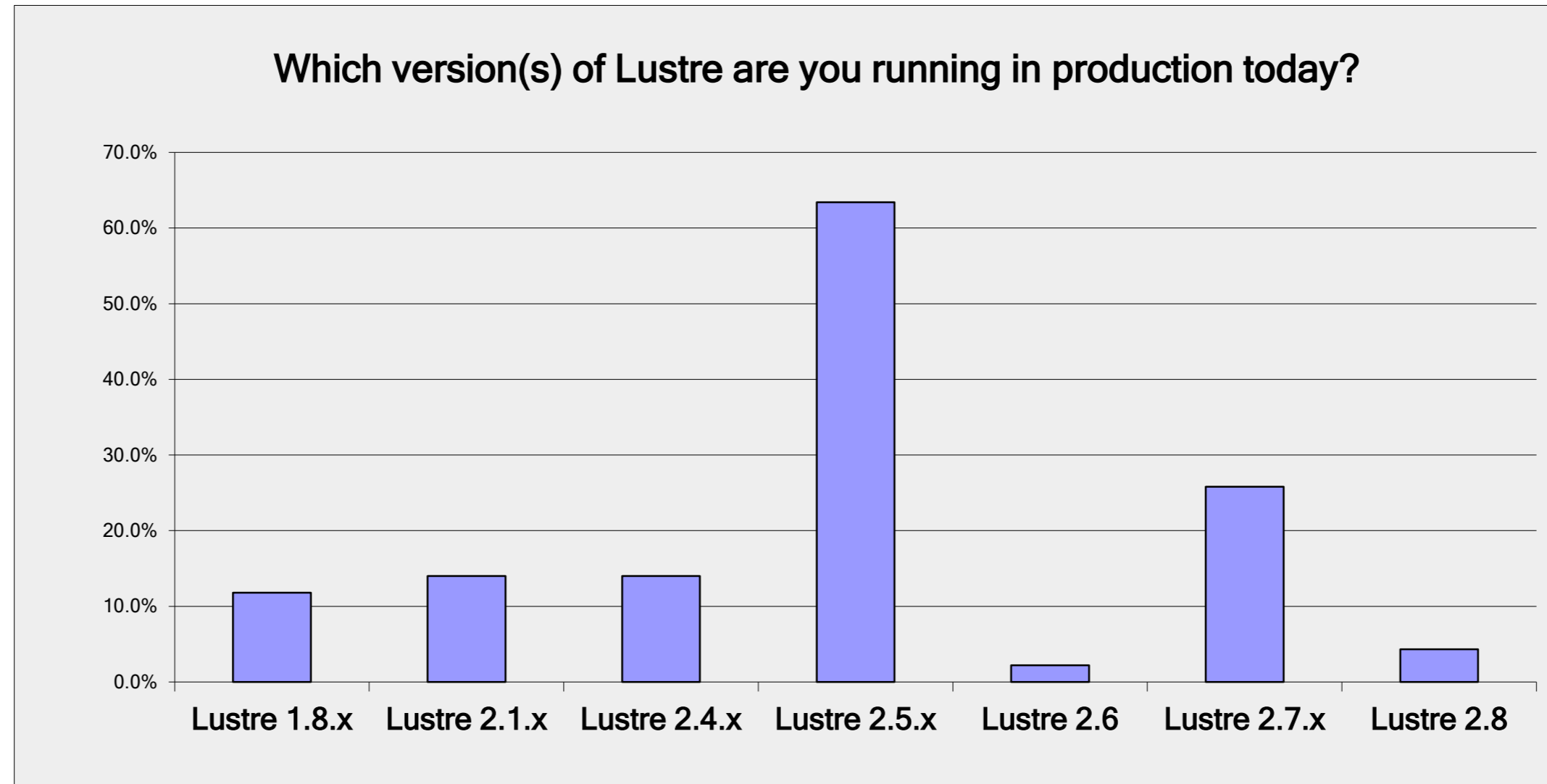
http://wiki.opensfs.org/Lustre_Working_Group

Community Survey

- Has been running for 5 years
- LWG devises questions
- Useful for tracking trends in Lustre usage
- Highest number of respondents yet for 2016 survey (97)
- Full details available at http://wiki.opensfs.org/Lustre_Community_Survey



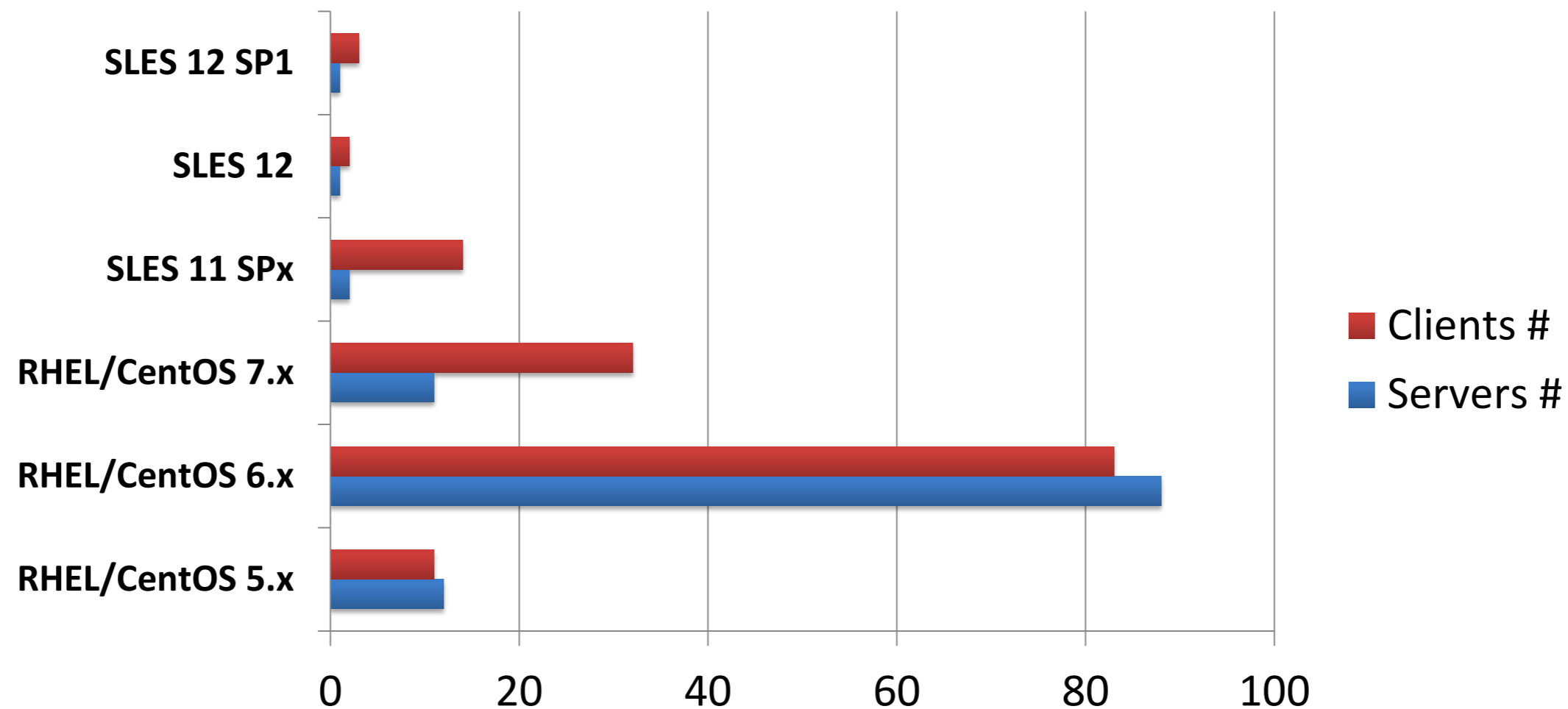
Community Survey - Versions



- Lustre* 2.5.x remains the dominant version in production usage
- Strong adoption of more current releases (even 2.8 before GA)
- Lustre 1.8.x usage finally dwindling

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

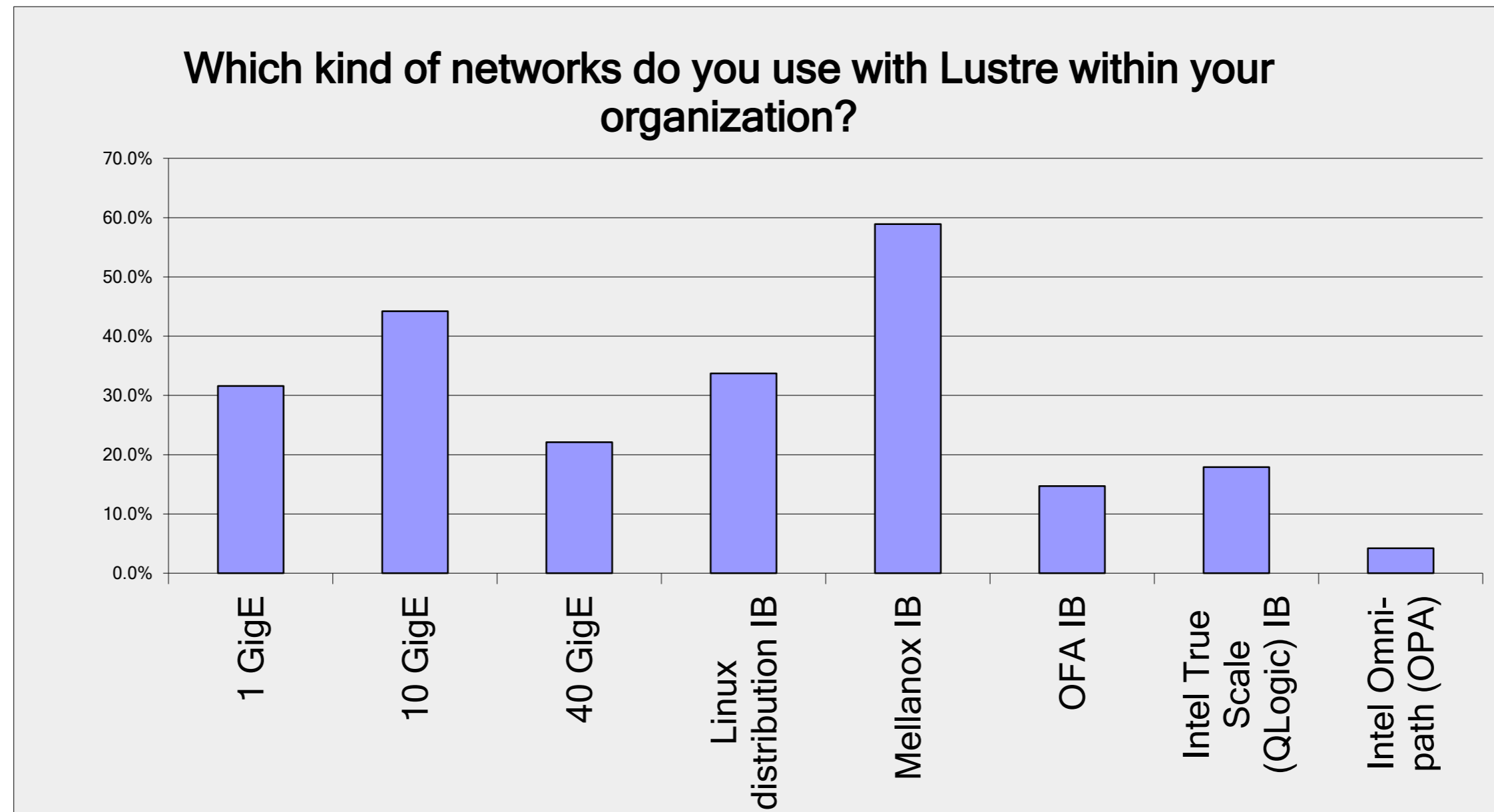
Community Survey - Linux distros



- RHEL/CentOS 6.x still the most widely used distro
- RHEL/CentOS 7.x clients; servers appearing
- RHEL/CentOS 5.x winding down

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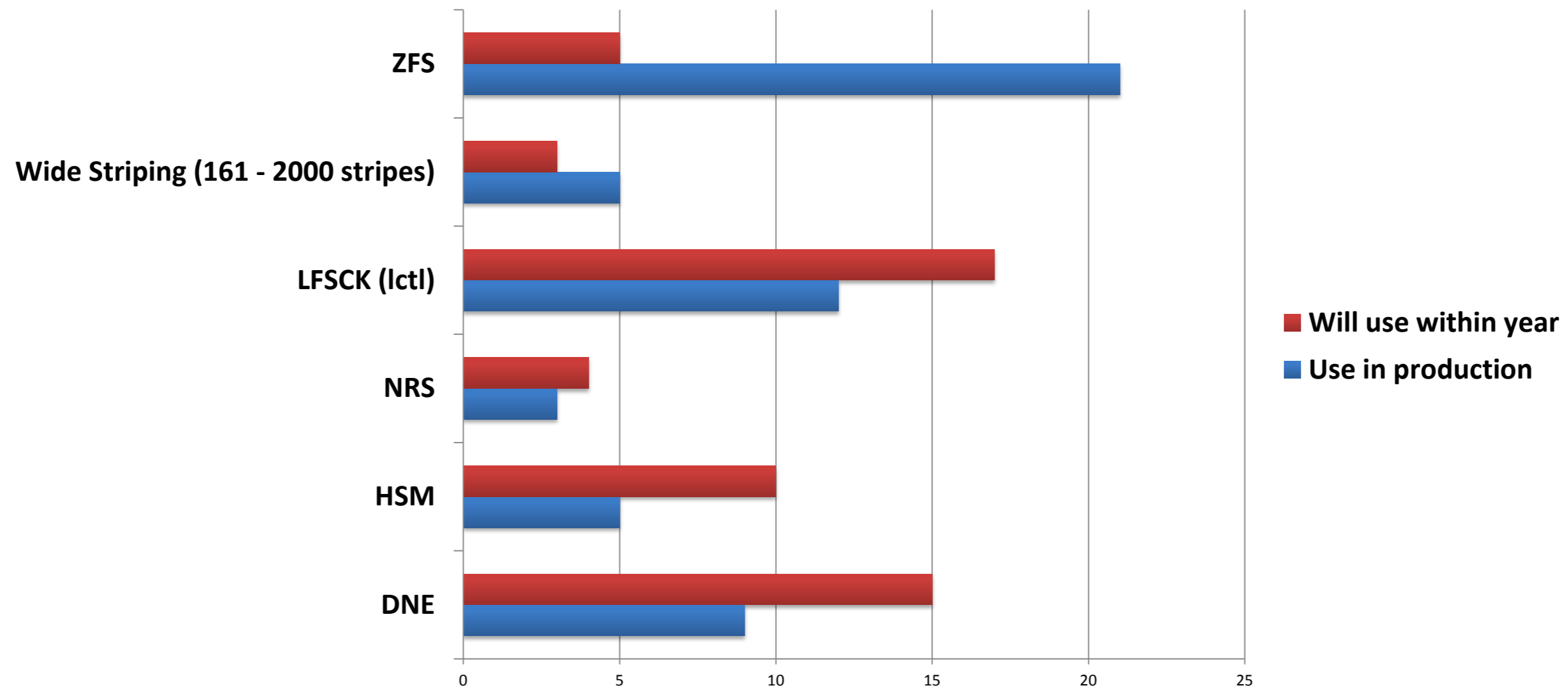
Community Survey - Networks



- Many options used but Mellanox and 10 GigE most common

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Community Survey – New Features

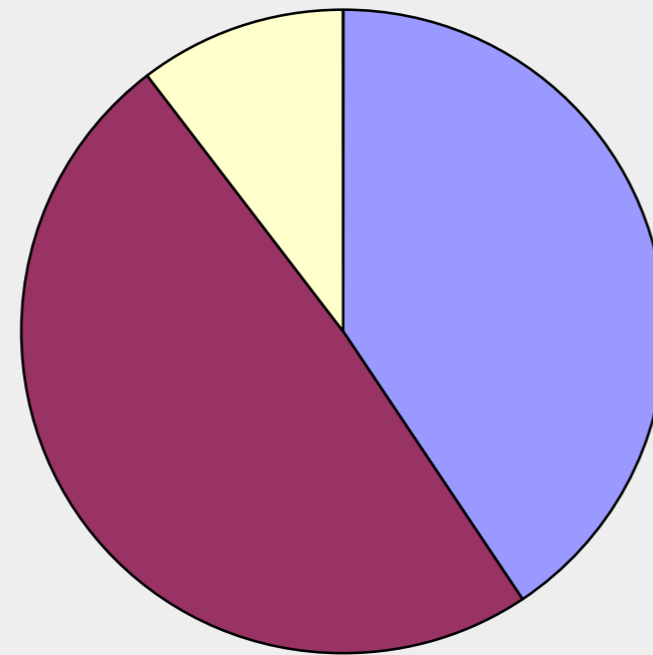


- Lustre on ZFS used at significant number of production sites
- DNE and LFSCK usage expected to increase this coming year

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Community Survey - Support

What best describes your Lustre support situation?



- We have formal Lustre support arrangements in place with another organization
- We self-support
- We offer support to others

- Even split between those self-supporting and those using/providing vendor support

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Lustre* Quality

- 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
 - Soak testing
 - Static code analysis tools
- Drawing on expertise from outside Lustre community
 - Influence from upstream Linux community
 - Input from Intel software experts

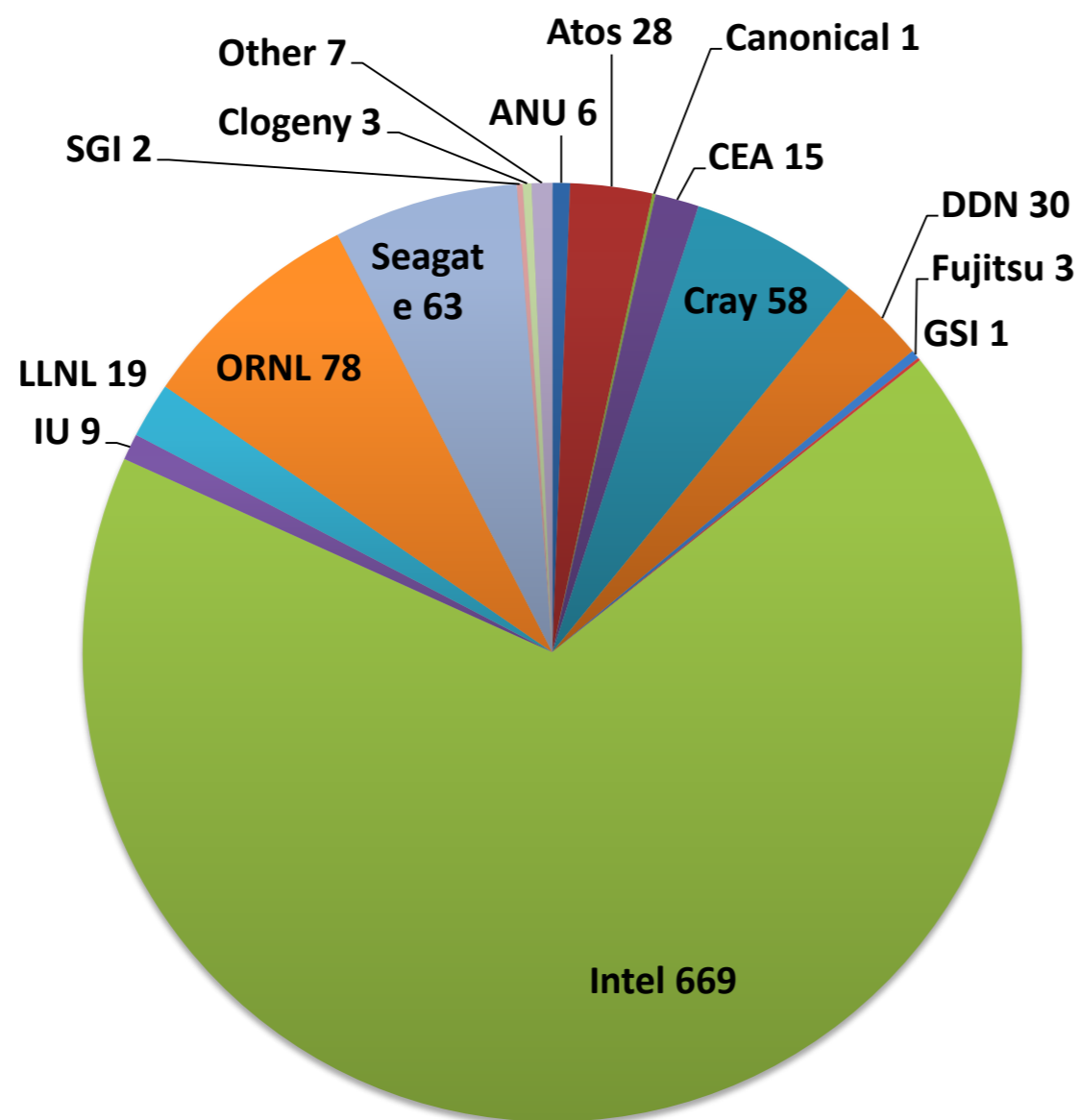
Lustre* 2.8

- GA March 2016
 - Originally targeted for Sept 2016
- Strong feature set
 - RHEL 7.2 server support (LU-5022)
 - DNE Phase 2 (LU-3534)
 - LFCK Phase 4 (LU-6361)
 - Client Metadata RPC Scaling (LU-5319)
- http://wiki.lustre.org/Release_2.8.0

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Lustre* 2.8 - Contributions

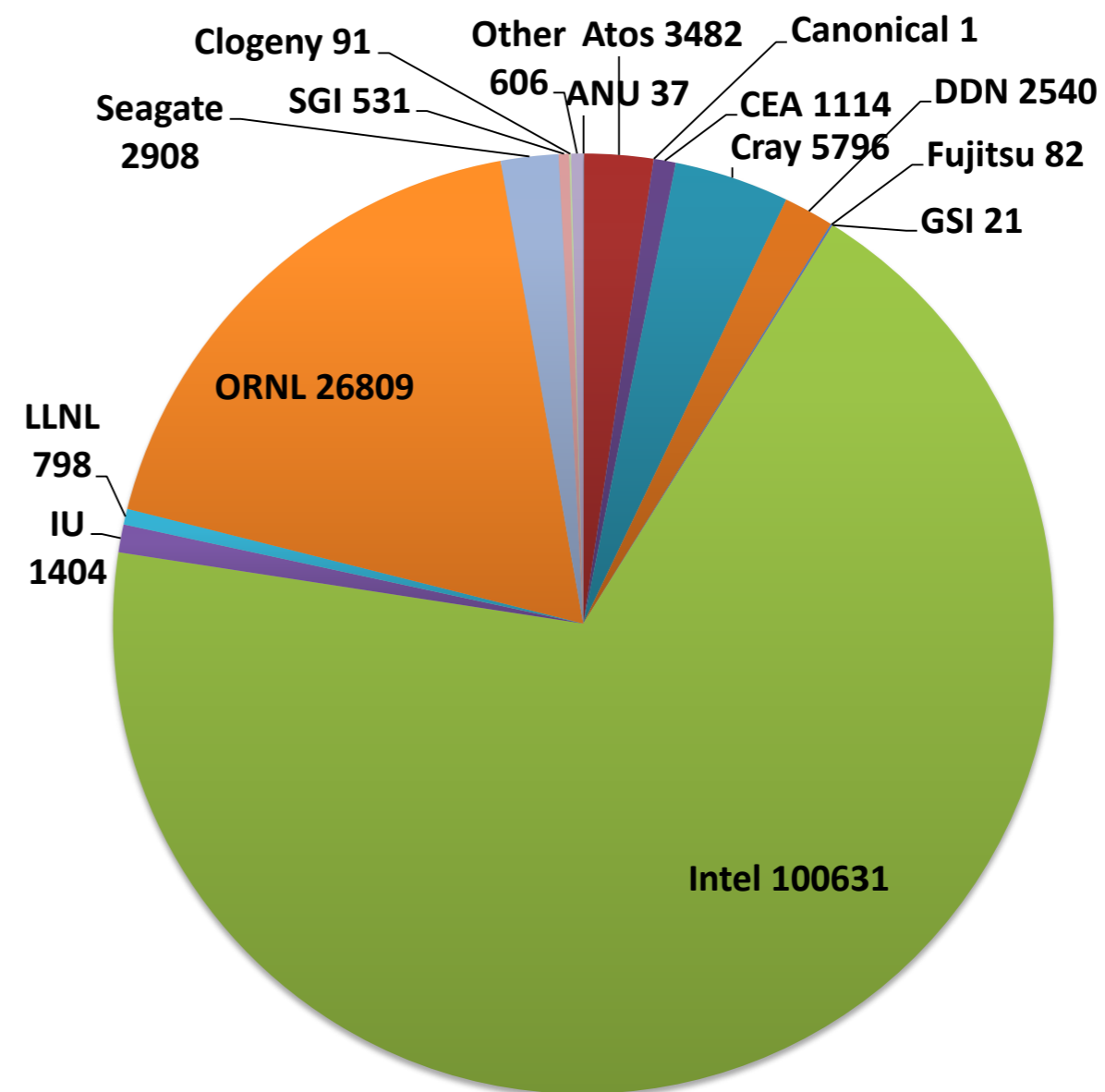
Number of Commits



Statistics courtesy of Chris Morrone (LLNL)

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

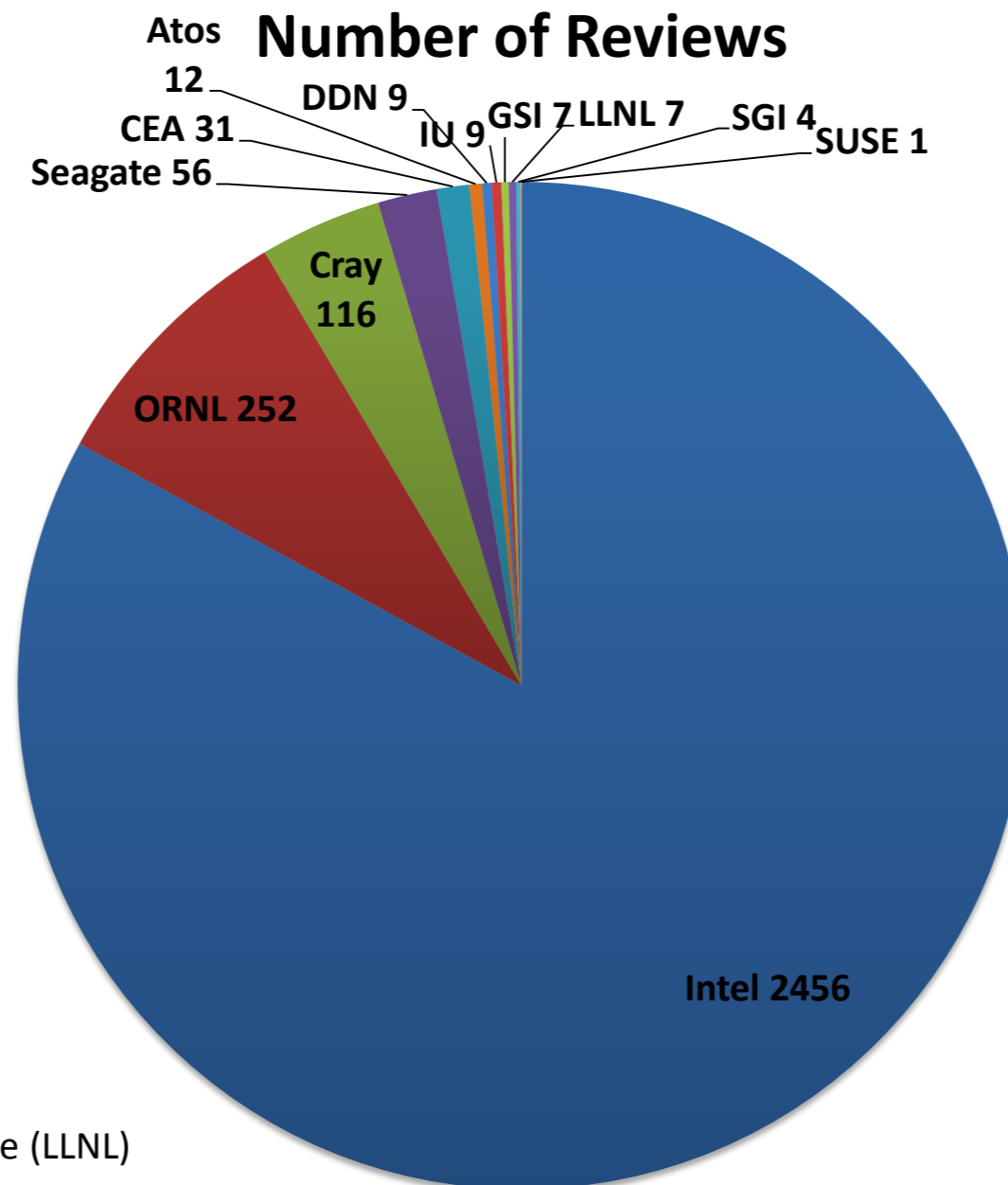
Lines of Code Changed



Aggregated data by organization between 2.7.50 and 2.8.0

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Lustre* 2.8 - Reviews



Statistics courtesy of Chris Morrone (LLNL)

Source: http://git.whamcloud.com/fs/lustre-release.git/shortlog/refs/heads/b2_8
Aggregated data by organization between 2.7.50 and 2.8.0 tags

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	741	193K	65	15
2.8.0	992	147K	92	17

Statistics courtesy of Chris Morrone (LLNL)
Source: <http://git.whamcloud.com/fs/lustre-release.git>

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Lustre* 2.9

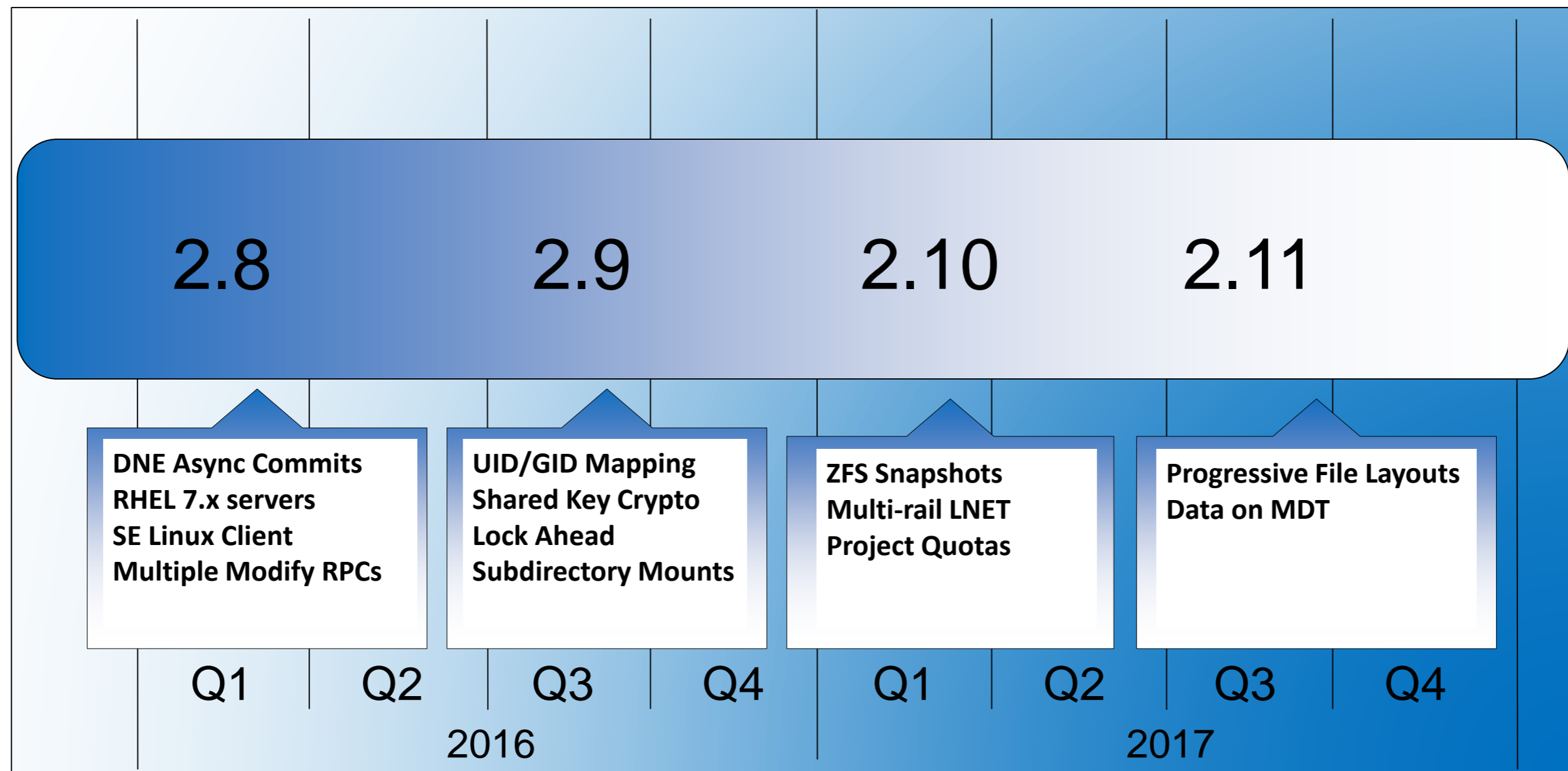
- Targeted GA August 2016
 - Feature freeze end of May
- Will support RHEL 7.2 servers/clients and SLES12 SP1 clients
 - Dropping support for RHEL 6 and SLES11
- Interop/upgrades from Lustre 2.8 servers/clients
- Several new features targeted for this release
 - UID/GID Mapping (LU-3291)
 - Share Key Crypto (LU-3289)
 - Subdirectory Mounts (LU-28)
- http://wiki.lustre.org/Release_2.9.0

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Lustre* 2.10 and Beyond

- Many interesting long term features in development
 - Multi-rail LNET
 - Progressive File Layouts
 - Project quotas
- Full list maintained on lustre.org wiki
 - <http://wiki.lustre.org/Projects>
- Highlights and timelines shown on community roadmap
 - <http://lustre.org/roadmap/>

Community Release Roadmap



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>

Last updated: March 24th 2016

Lustre* Release Documentation

- Latest version of user documentation dynamically available to download
 - <http://lustre.opensfs.org/documentation/>
- See Richard Henwood's LUG 2013 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
- Scope to create more dynamic content on lustre.org
 - Ken Rawlings will be talking about how you can help here!

Summary

- Strong community adoption of recent releases
- Lustre 2.8 is GA and many sites planning to adopt it
- Some interesting developments in progress
- Plenty of options for those interest in participating

Thank you

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