



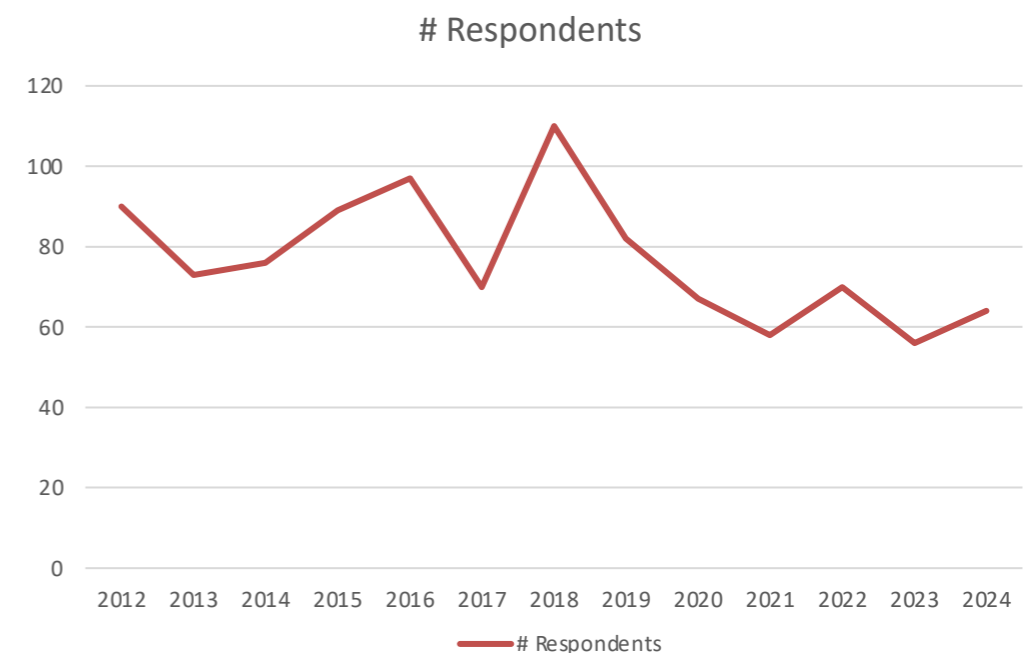
Community Release Update

May 7th 2024

Peter Jones, Whamcloud
OpenSFS Lustre Working Group

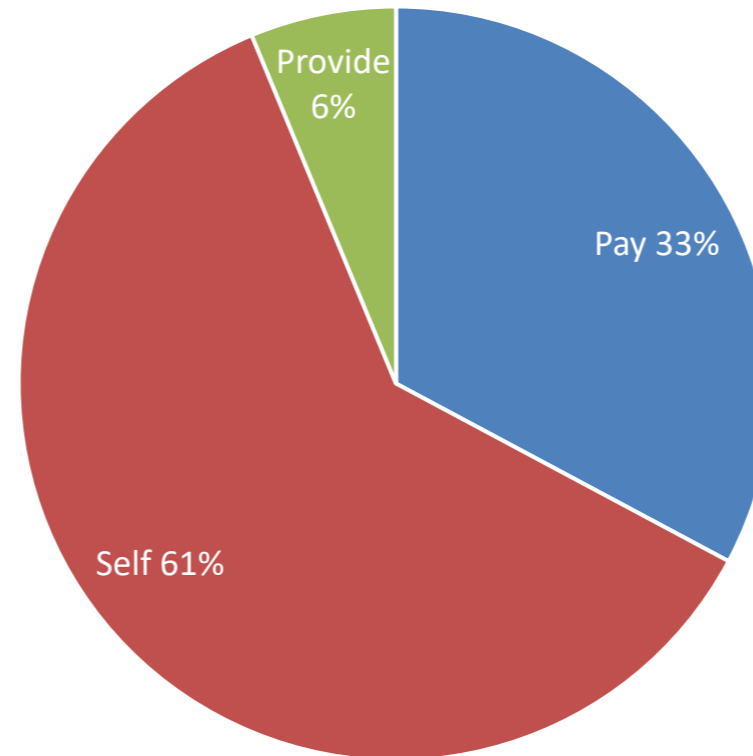
OpenSFS Lustre Working Group

- Has been operating as the forum for collaboration on the community releases for over a decade
- Led by Peter Jones (Whamcloud) and Rick Mohr (ORNL)
- All welcome to attend and/or join the mailing list
- For more information visit the wiki
- http://wiki.opensfs.org/Lustre_Working_Group
- LWG issues survey annually in March to track trends in Lustre usage
- Full details available at http://wiki.opensfs.org/Lustre_Community_Survey



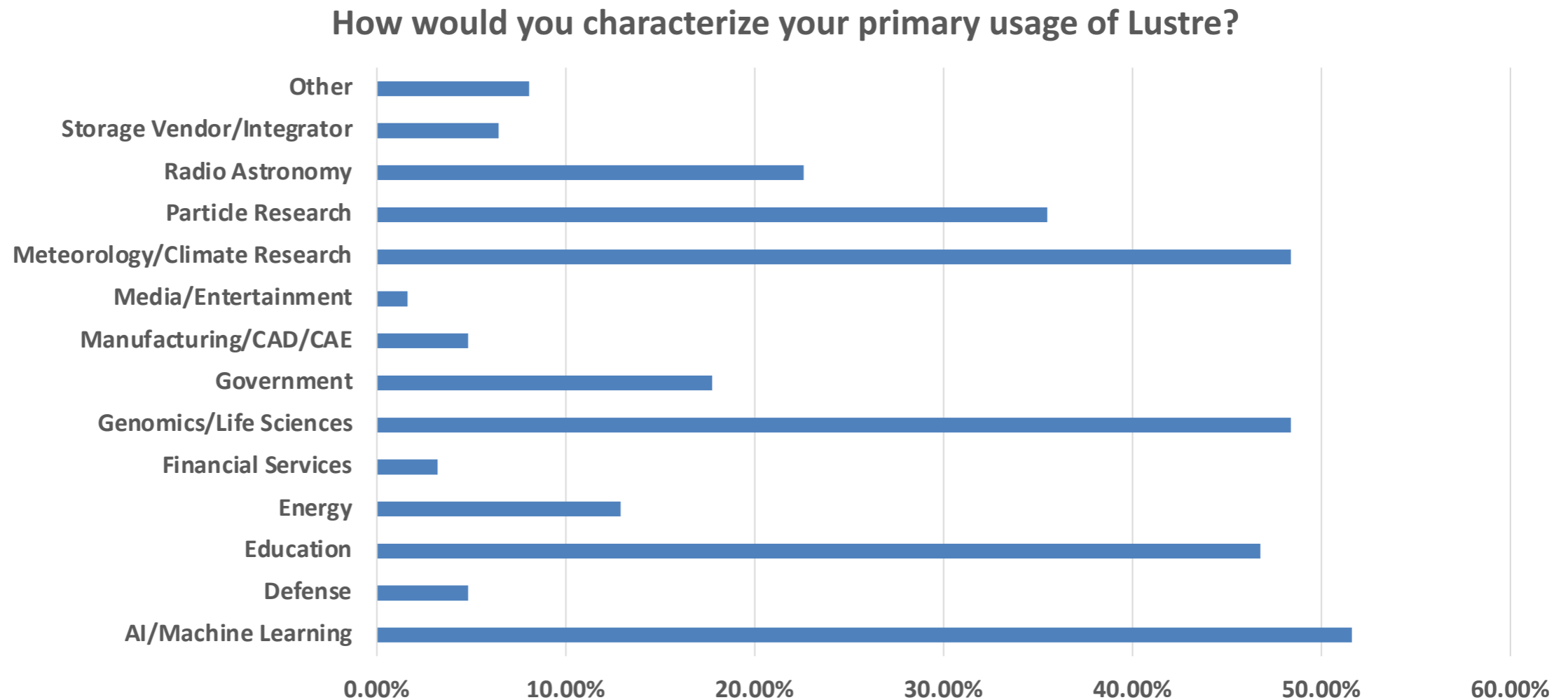
Community Survey – Support

What best describes your Lustre support situation?



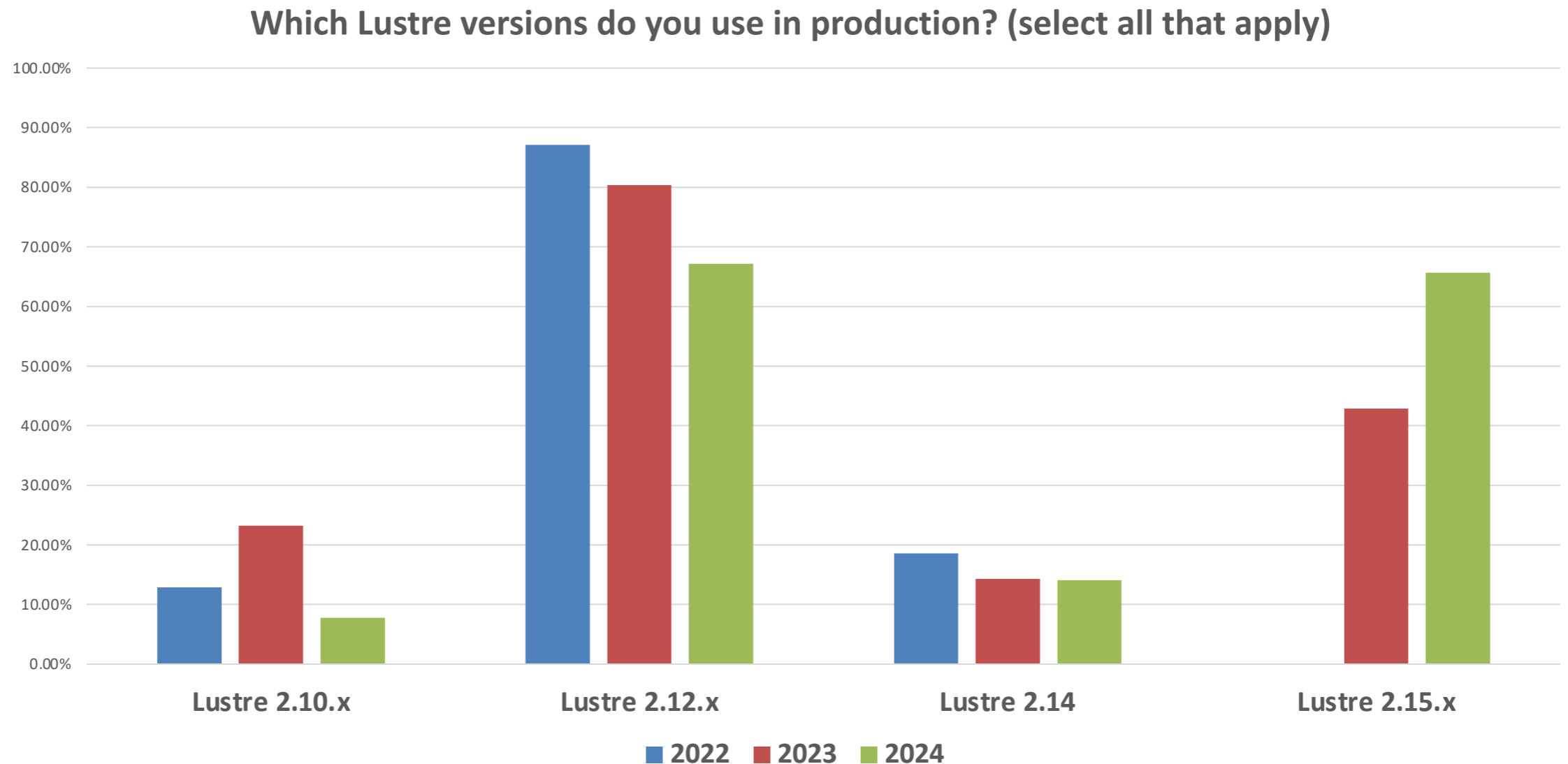
- Strong representation from open-source users

Community Survey – Primary Usage



- AL/ML indicated by over half of respondents!
- Other selections were various research fields

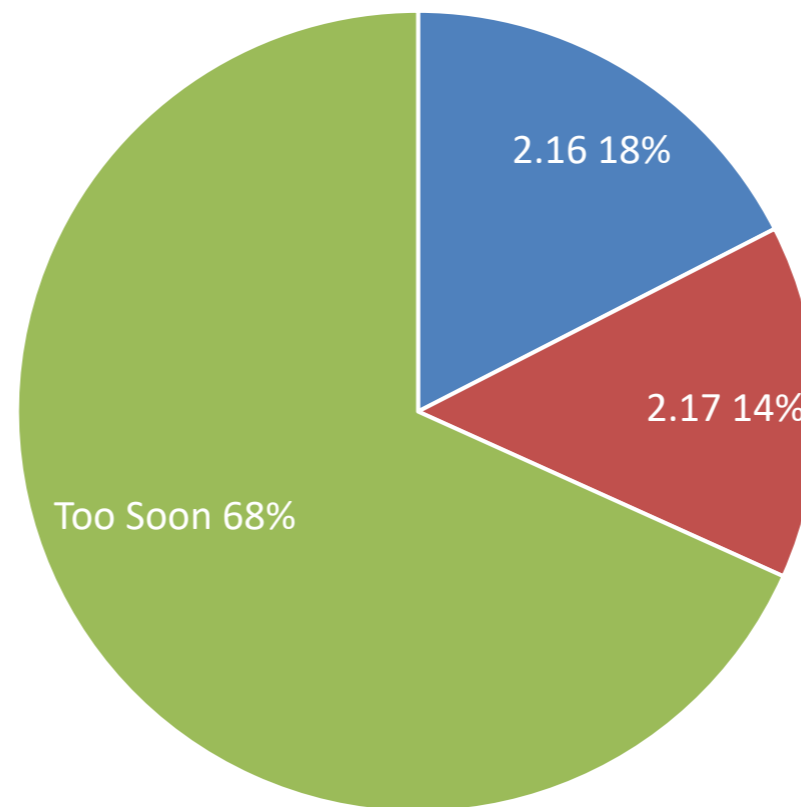
Community Survey – Lustre Versions



2.12.x and 2.15.x about level
One respondent using unsupported tag in production!

Community Survey – LTS Transition

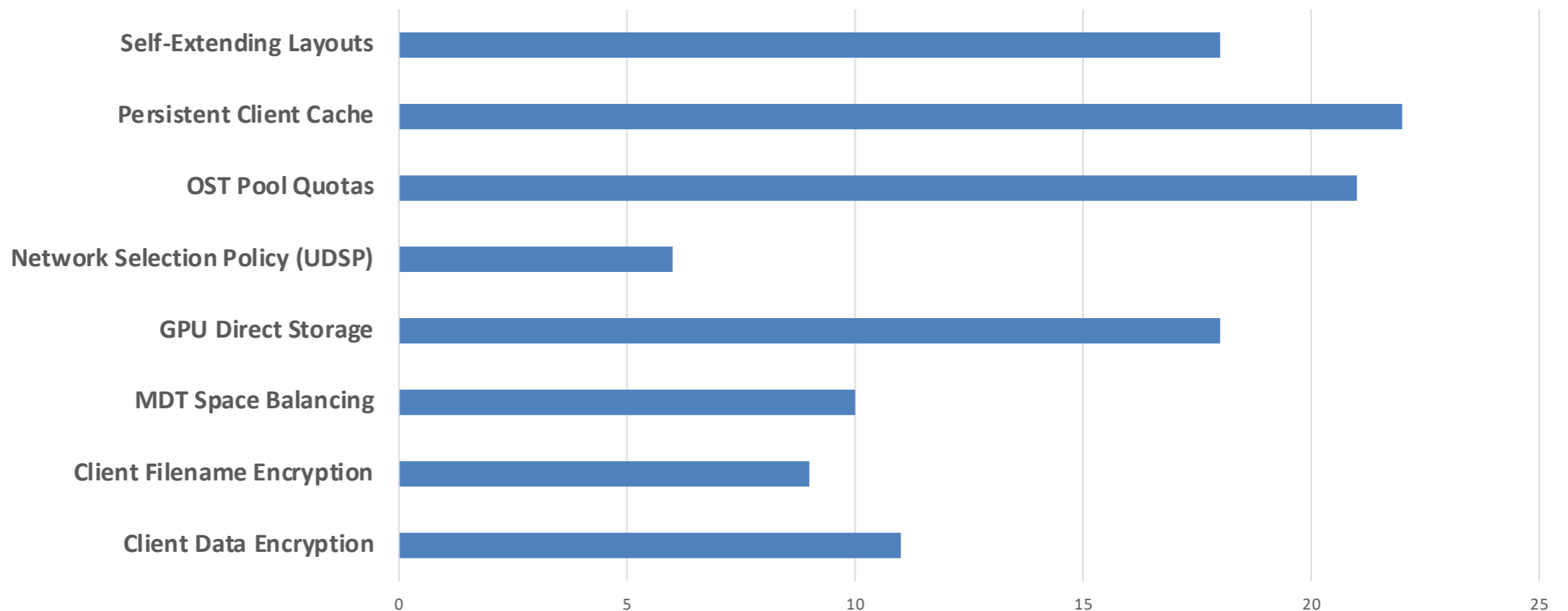
Next LTS Transition



Most sites not ready to consider moving again right now

Community Survey – Feature Usage

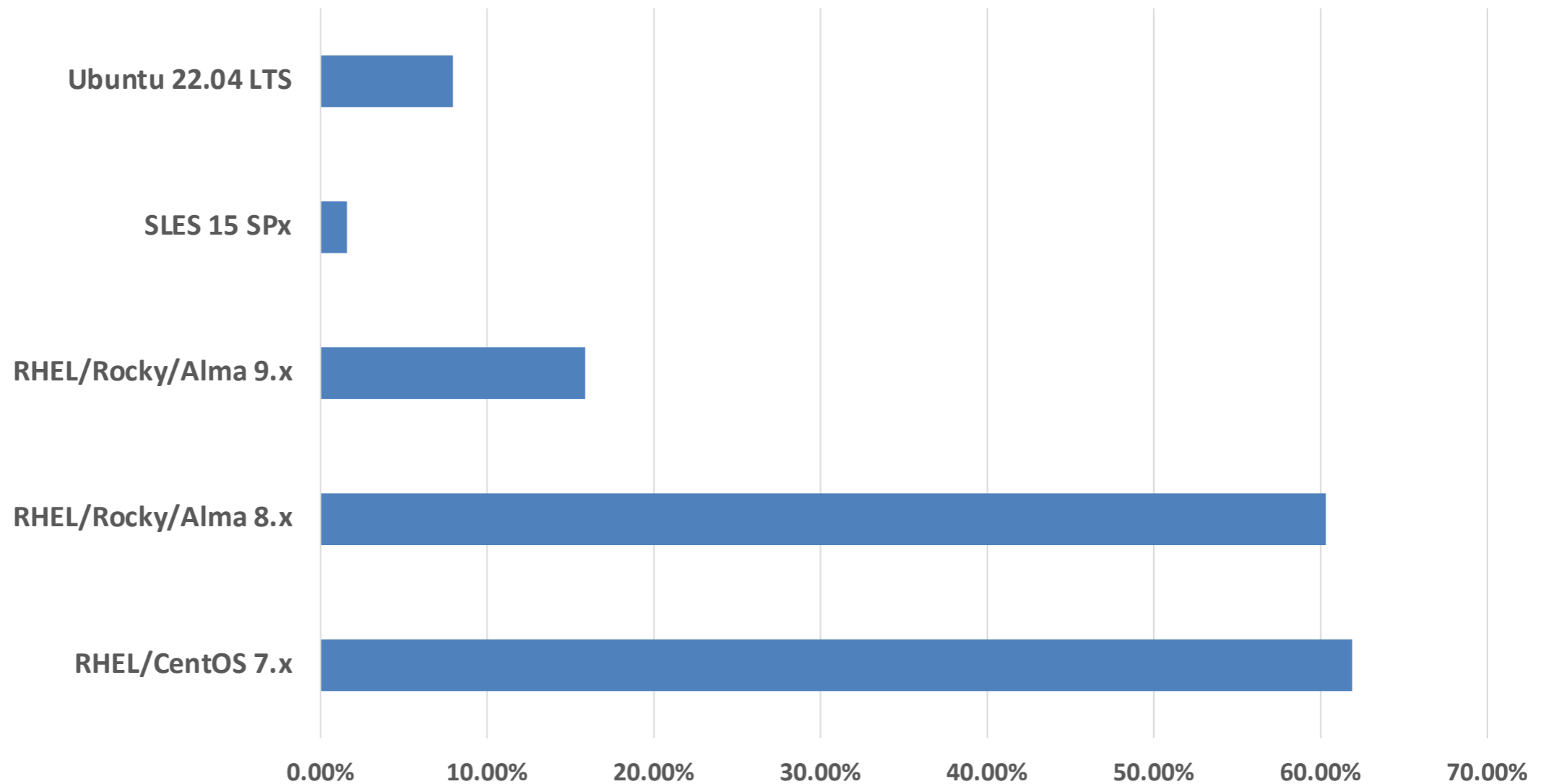
Which of the following recent Lustre features do you plan to use in production within the coming year?



Strong interest in most of the newer features

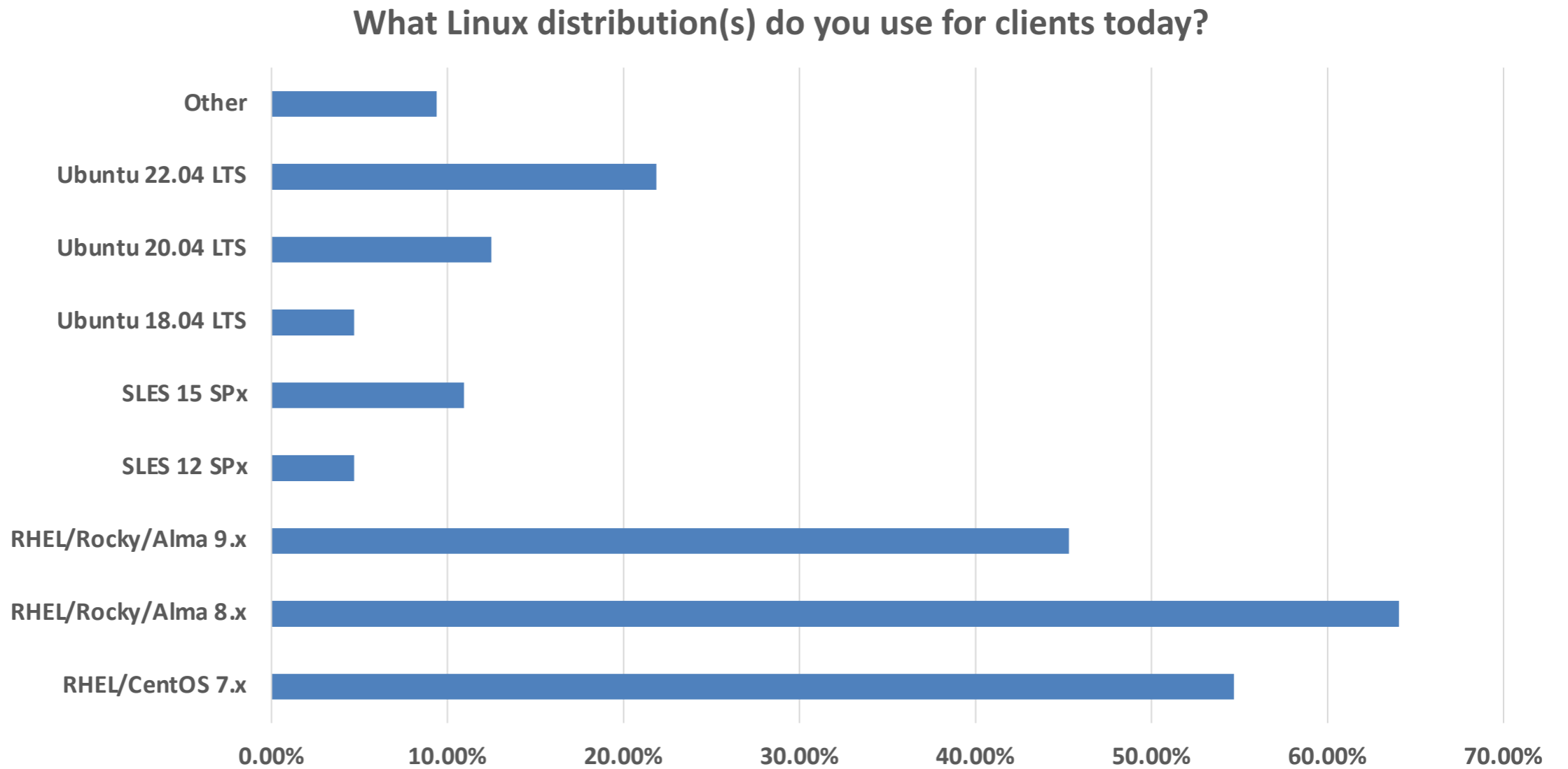
Community Survey - Linux distros (servers)

What Linux distribution(s) do you use for servers today?



RHEL 8.x servers and RHEL 7.x servers on a par
Mostly ZFS Self-Supporters who are using RHEL9.x

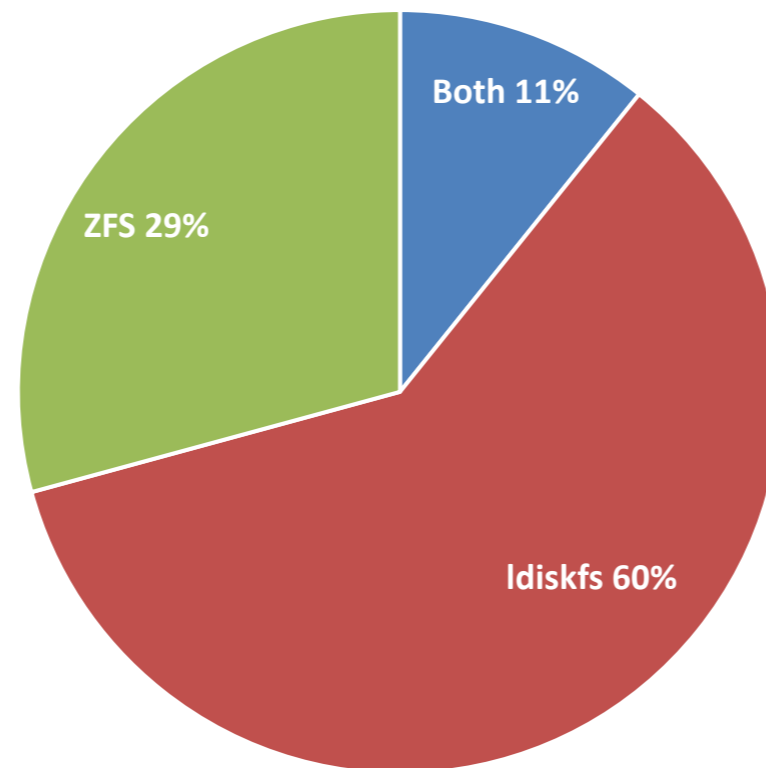
Community Survey - Linux distros (clients)



RHEL 8.x clients most common and RHEL 9.x clients growing fast

Community Survey – ZFS vs Idiskfs

Ldiskfs vs Zfs



Both options popular but Idiskfs remains most common option

Community Survey - Analysis

- Lustre 2.15.x matches Lustre 2.12.x and should be the clear leader in the 2025 survey
- Most commonly cited "missing feature" is S3 integration
- We need to do a better job of communications:
 - Several respondents cited present feature as "missing" (e.g multi-tenancy)
 - One respondent bemoaned the cessation of efforts related to getting Lustre into the mainline kernel
 - One respondent suggested needing to move to "another flashy fs" to improve small IO performance on their HDD filesystem

Lustre 2.15.x LTS

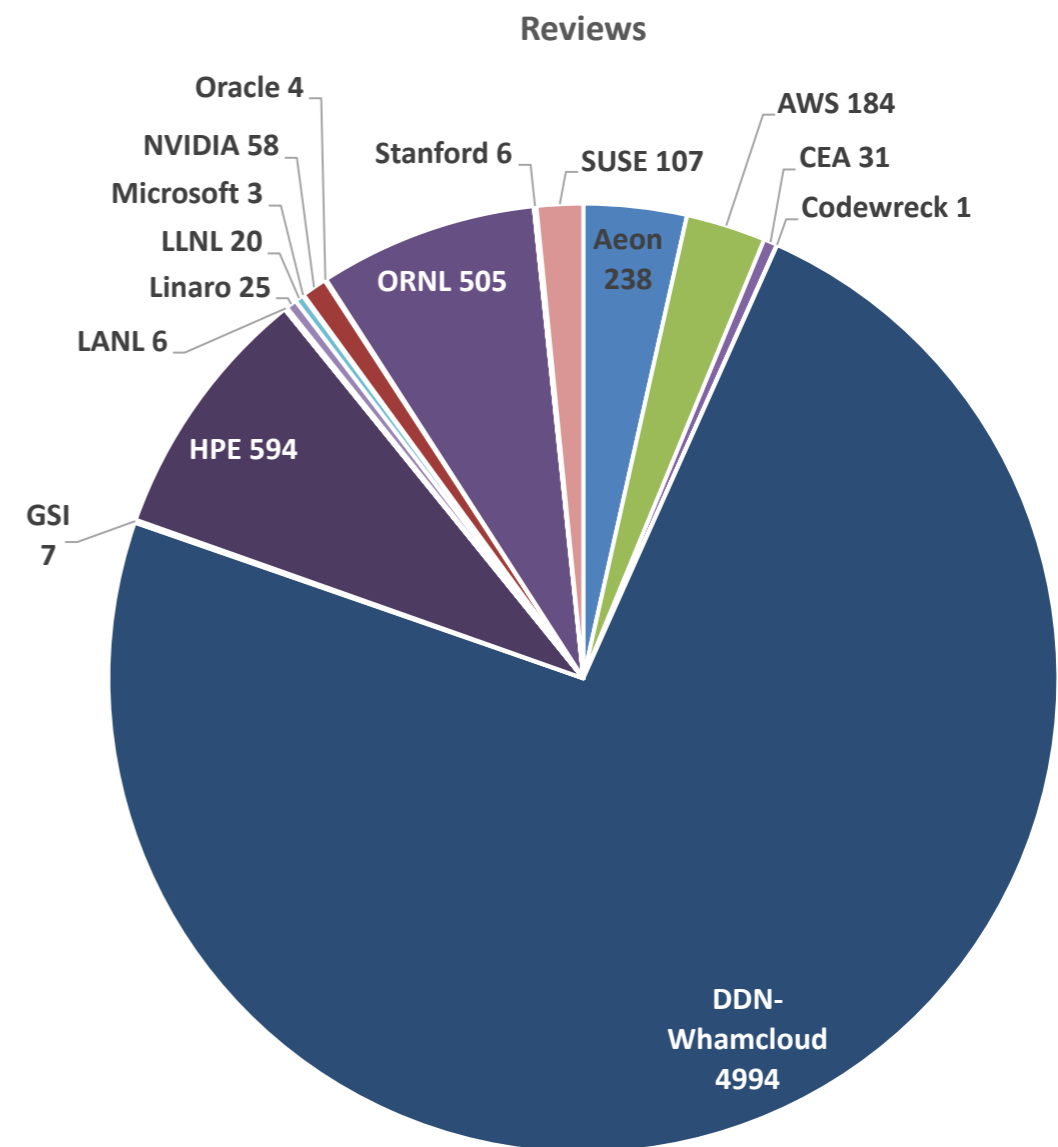
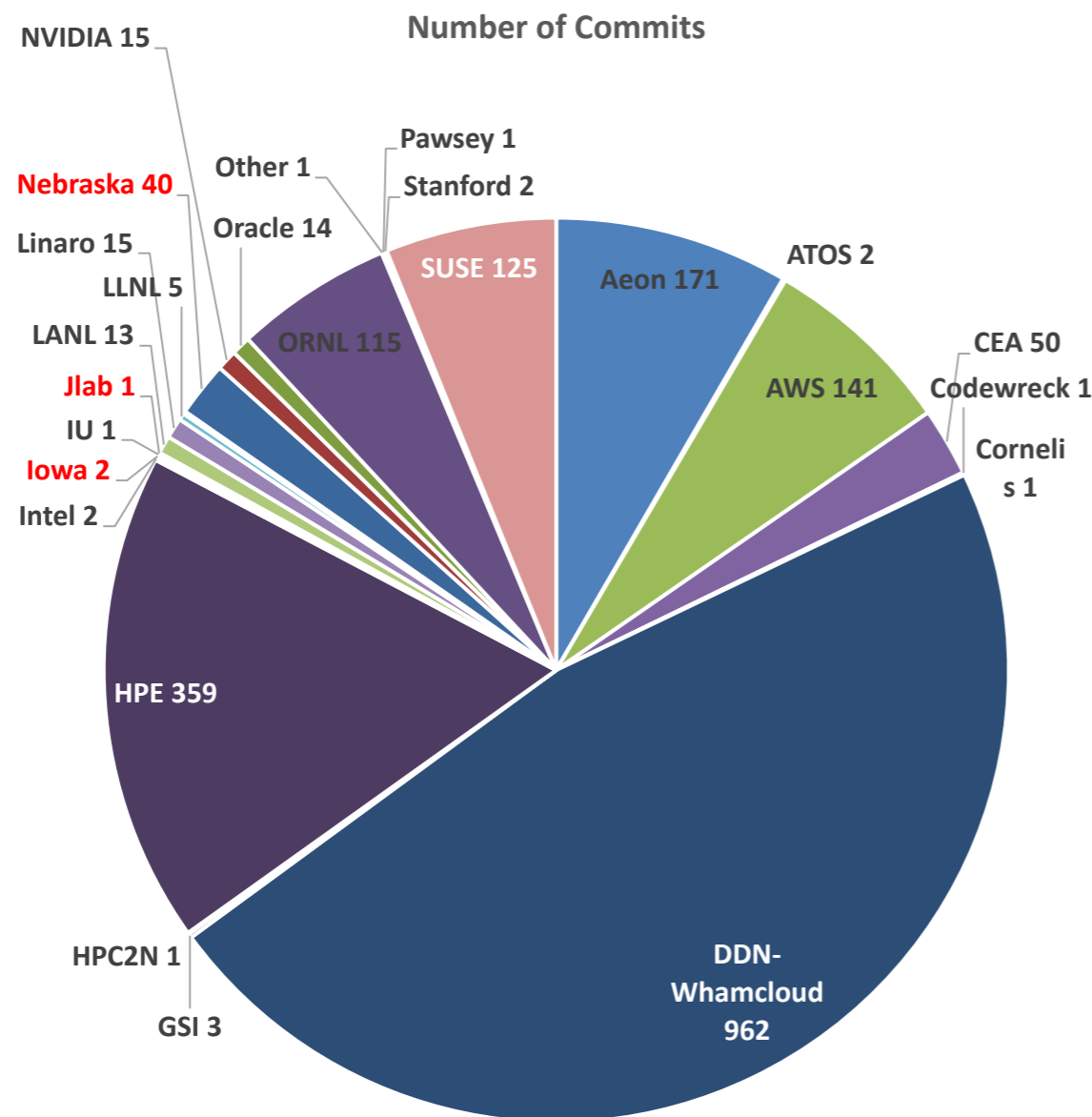
- Taken over from 2.12.x LTS
- Lustre 2.15.5 coming soon
 - RHEL 8.10 servers/clients ([LU-17410](#))
 - RHEL 9.4 clients ([LU-17404](#))
 - https://wiki.lustre.org/Lustre_2.15.5_Changelog

LTS	GA	Changelog
2.15.0	Jun-22	http://wiki.lustre.org/Lustre_2.15.0_Changelog
2.15.1	Aug-22	https://wiki.lustre.org/Lustre_2.15.1_Changelog
2.15.2	Jan-23	http://wiki.lustre.org/Lustre_2.15.2_Changelog
2.15.3	Jun-23	http://wiki.lustre.org/Lustre_2.15.3_Changelog
2.15.4	Dec-23	https://wiki.lustre.org/Lustre_2.15.4_Changelog

Lustre 2.16

- Targeting for Q3 2024 release
 - http://wiki.lustre.org/Release_2.16.0
 - Schedule adjusted to allow IPv6 work to complete
 - RHEL 9.4 servers/clients
 - SLES15 SP5/Ubuntu 24.04 clients
- Interop/upgrades from latest Lustre 2.15.x
- Features in the release
 - RHEL 9.x server support **MERGED**
 - IPv6 Support ([LU-10391](#)) **MERGED**
 - Final test framework change needed for routine automated testing
 - Optimized Directory Traversal ([LU-15975](#)) **MERGED**
 - Aka "Improved Statahead"

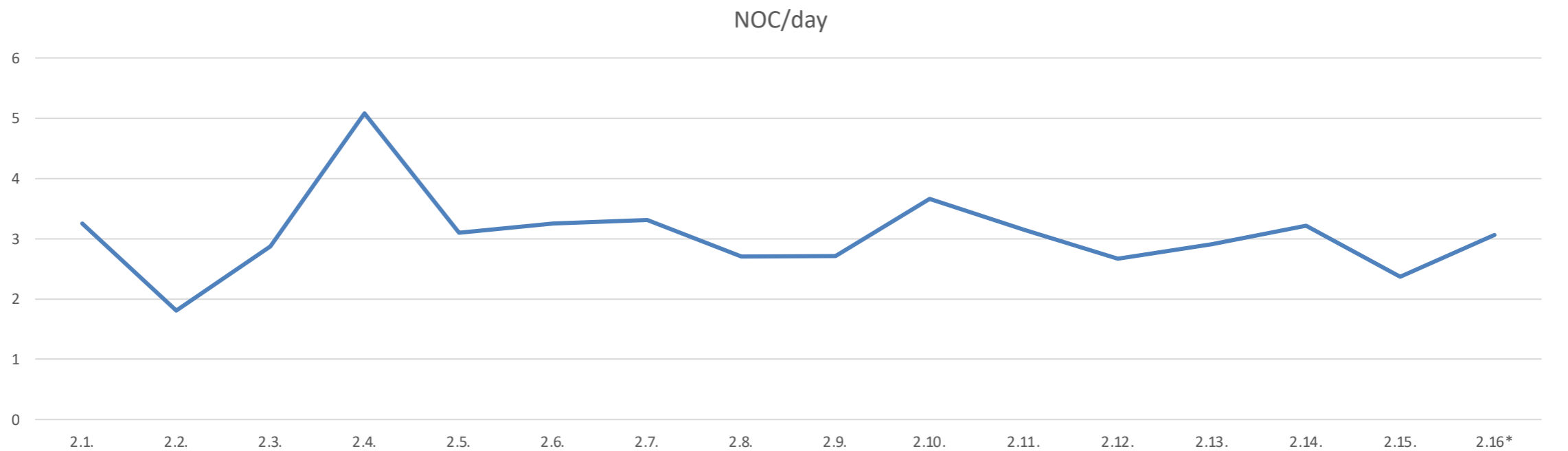
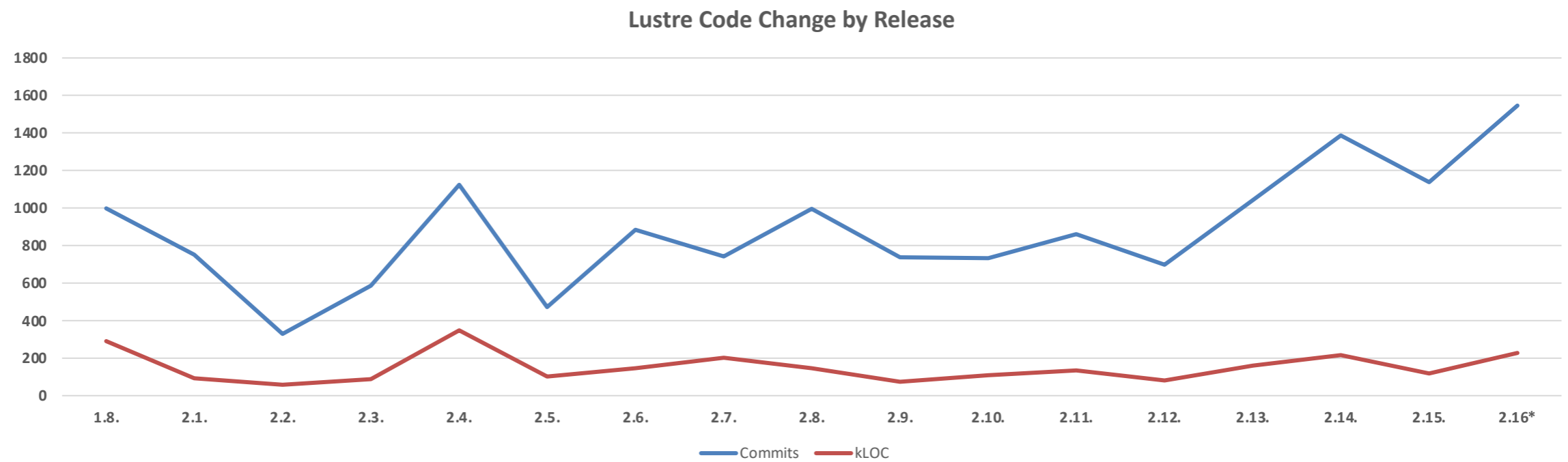
Lustre 2.16 – Contribution statistics (so far)



Data courtesy of Dustin Leverman (ORNL) and Chris Morrone (LLNL)

Source: <https://git.whamcloud.com> 2.15.50 to 2.15.63

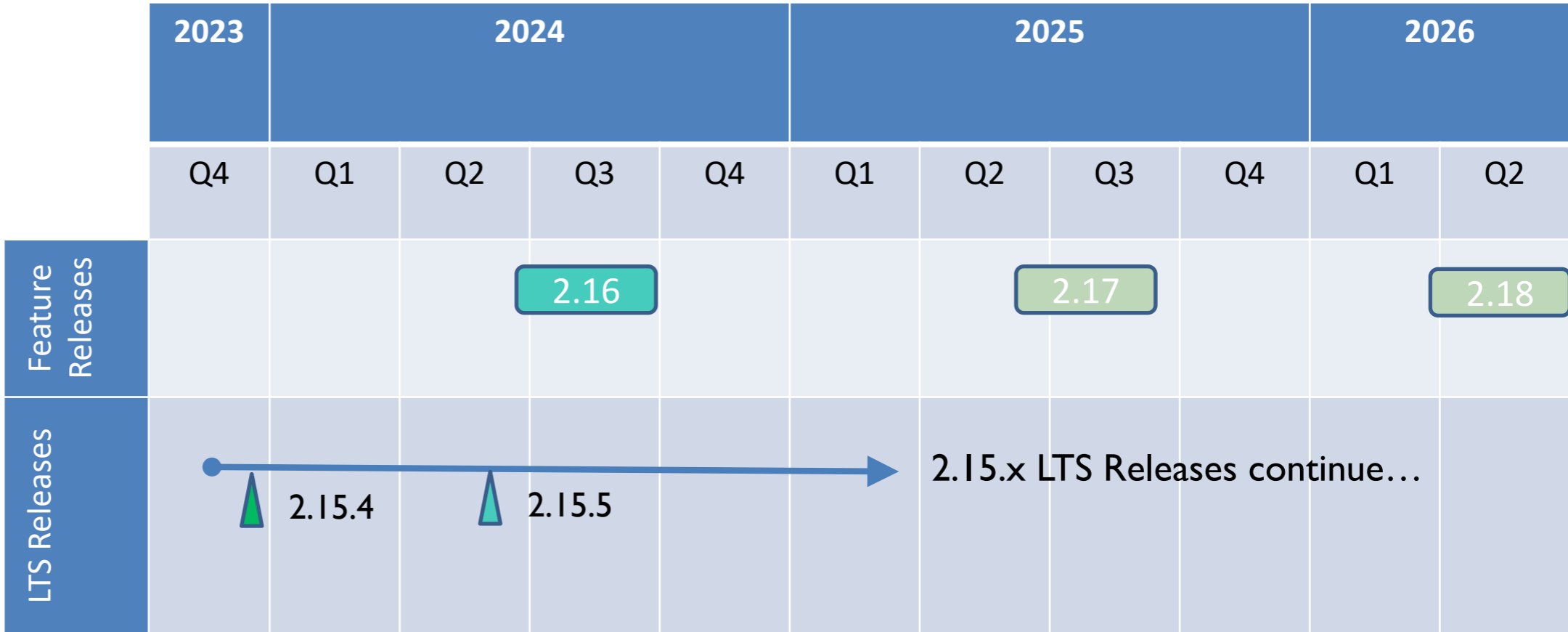
Lustre 2.16 – Historical Comparisons



Data courtesy of Dustin Leverman (ORNL) and Chris Morrone (LLNL)

Source: <https://git.whamcloud.com>

Lustre Community Roadmap



LEGEND: Completed Expected Timeline Timeline TBD → LTS Branch

- 2.16**
- [RHEL9 Server Support](#)
 - [IPv6](#)
 - [Optimized Directory Traversal](#)

- 2.17**
- [Client Data Compression](#)
 - [Metadata Writeback Cache](#)
 - [Erasure Coding](#)

- 2.18**
- [RHEL10 Server Support](#)
 - [Metadata Redundancy v1](#)

* 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>



How to Contribute

- Complete the annual OpenSFS survey
 - https://wiki.opensfs.org/Lustre_Community_Survey
- Participate in the LWG
 - https://wiki.opensfs.org/Lustre_Working_Group
- Lustre documentation
 - Lustre Ops Manual – report issues in LUDOC JIRA project
 - https://wiki.lustre.org/Lustre_Manual_Changes
 - Lustre.org wiki (Lustre internals and sysadmin info)
 - http://wiki.lustre.org/Category:Lustre_Systems_Administration
- Join a Lustre community organization (OpenSFS/EOFS)
- Participate in Community events
 - LUG, LAD, Regional LUG events, SC/ISC BOFs, online
- Lustre development
 - Submitting/Reviewing/Testing Lustre code
 - <https://wiki.lustre.org/Development>



No Lustre Infrastructure Move Necessary

- Found a way to minimize migration impact to JIRA/wiki
- All activity completed
- Some cleanup of data took place
- Please report any anomalies you spot to info@whamcloud.com



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Summary

- Lustre 2.16.0 targeted for Q3 2024
- Lustre 2.15.5 coming soon with RHEL 8.10 support
- LWG http://wiki.opensfs.org/Lustre_Working_Group

Thank you

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