

LUG JAPAN
2021



Lustre Community Update

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OpenSFS Lustre Working Group

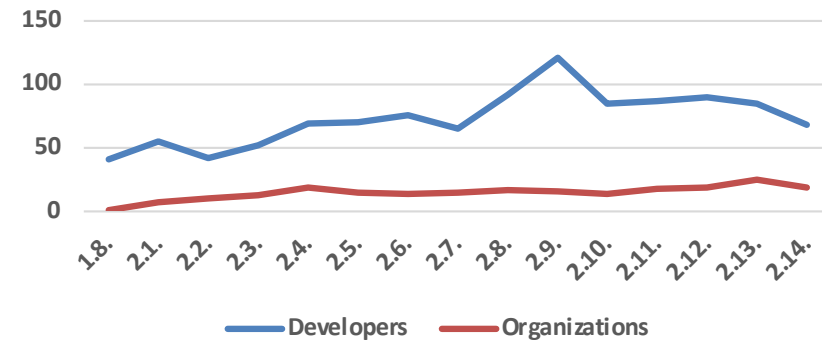
December 10th 2021

2020 – A Decade of Community Development

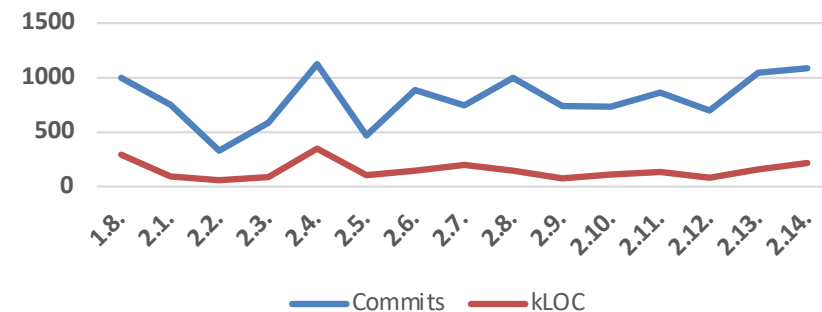
- External contributions were rare
 - Lustre 1.8 (2009) had no external contributions
 - Lustre 2.13 (2019) had contributions from 85 developers from 25 organizations
- Since 2010 we have had Lustre code contributions from over 200 individual developers
- Many of the developers have worked for multiple organizations over that period
- The contribution model means Lustre continues to thrive even as participating organizations change strategies



Lustre Contributions by Release



Lustre Code Change by Release



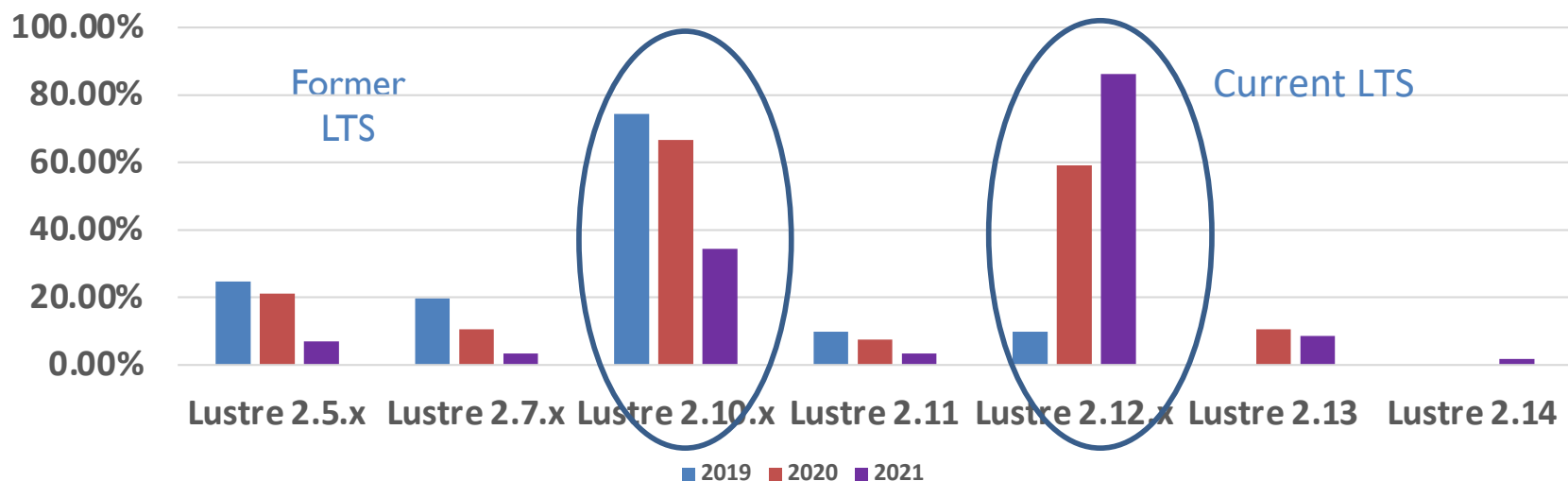
Data courtesy of Dustin Leverman (ORNL) and Chris Morrone (LLNL)



Lustre 2.12.x LTS

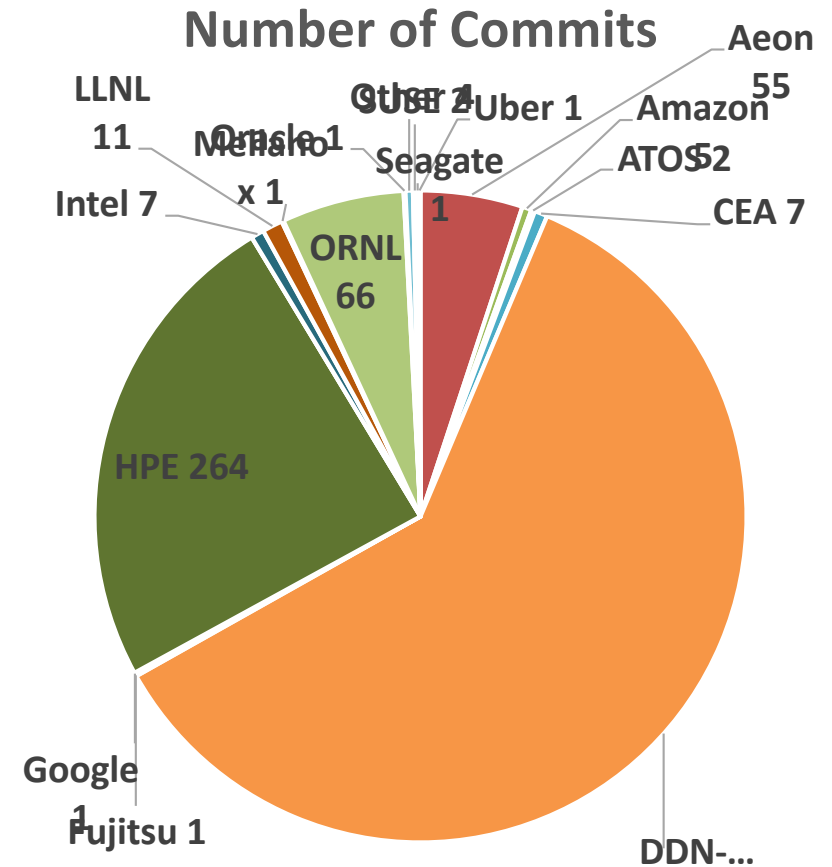
- Lustre 2.12.7 went GA in July
 - RHEL 7.9 server and client support
 - RHEL 8.4 and SLES12 SP5 client support
 - http://wiki.lustre.org/Lustre_2.12.7_Changelog
- Lustre 2.12.8 expected towards the end of the year **RHEL 8.5 GA will affect timing!**

Which Lustre versions do you use in production? (select all that apply)



Lustre 2.14

- Went GA in February
- OS support
 - RHEL 8.3 servers/clients
 - RHEL 8.3/SLES15 SP2/Ubuntu 20.04 clients
- Interop/upgrades from 2.13 and latest Lustre 2.12.x
- Number of useful features
 - Client-side Data Encryption (LU-12275)
 - OST Pool Quotas (11023)
 - DNE Auto Restriping (LU-11025)
- http://wiki.lustre.org/Release_2.14.0



Data courtesy of Dustin Leverman (ORNL)

Lustre 2.15

- Targeted for Q4 release
- OS support **Likely RHEL 8.5 by GA time!**
 - RHEL 8.4 servers/clients
 - RHEL 8.4/SLES15 SP3/Ubuntu 20.04 clients
- Interop/upgrades from 2.14 and latest Lustre 2.12.x
- Number of useful features
 - Client-side Directory Encryption (LU-13717)
 - GPU Direct (LU-14798)
 - Network Selection Policy (UDSP) (LU-9121)
- http://wiki.lustre.org/Release_2.15.0

Lustre Community Roadmap



LEGEND: ■ Completed ■ Expected Timeline ■ Timeline TBD → LTS Branch

2.14
• Client Data Encryption
• OST Pool Quotas
• DNE Auto Restraining

2.15
• Client Directory Encryption
• GPU Direct
• Network Selection Policy

2.16
• FLR Erasure Coding
• FLR Immediate Mirror
• Metadata Writeback 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>



LTS Recommendation

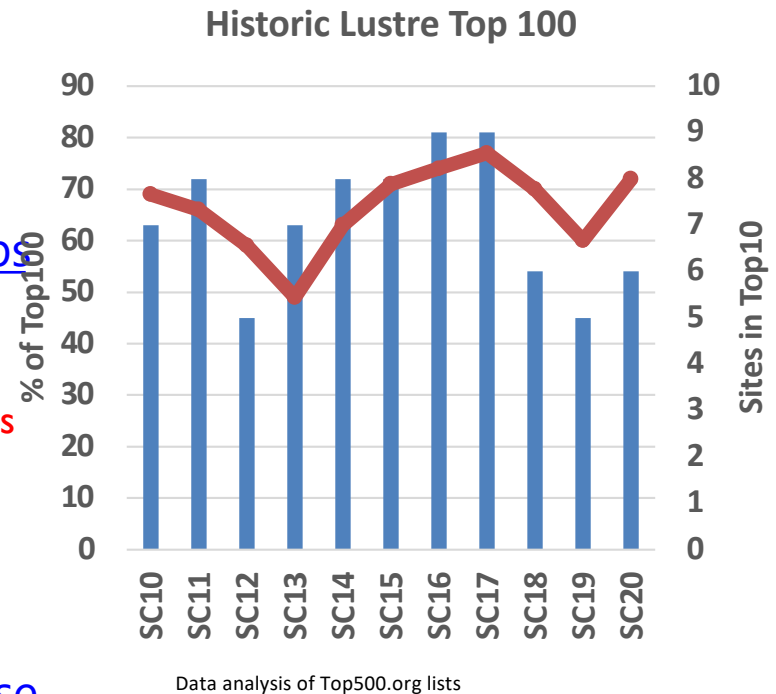
- Lustre 2.15 to become the new LTS branch with RHEL 8.x as primary distro for servers
 - Allows time for broader testing ahead of the initial GA
 - Will improve the quality of initial release
 - Provides time to work out alternative to CentOS (Alma/Rocky)
- What about those who prefer to remain on 2.12.x?
 - 2.12.x releases should continue for about another year
 - Interop between LTS releases means 2.12.x servers could be used with 2.15.x clients
 - Open source means that it is easy for interested parties to collaborate and publish any updates needed

Lustre Community Events

Include SC21 data?

- **Most 2021 events were still virtual**

- **LUG21** May 19th – 20th
<https://www.opensfs.org/events/lug-2021/>
- **ISC21** Lustre BOF Jul 1st
<https://sc21.supercomputing.org/http://www.eofs.eu/events/21-isc-lustre-bof>
- **LAD20** Sep 28th – 30th **China LUG dates may change**
<https://www.eofs.eu/events/lad21>
- **China LUG** Nov 3rd – 4th
<http://lustrefs.cn/clug2021/>
- **SC21** Lustre BOF Nov 18th
<https://sc21.supercomputing.org/presentation/?id=bof117&sess=sess364>
- **Japan LUG** Dec 10th
<https://www.jlug.info>



- **We hope to be able to meet in**

Thank you

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