



Community Development Working Group

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LUG 2013, April 16, 2013

CDWG Goals

- Facilitate community development of the Lustre software tree.
 - Coordinate efforts of multiple contributors
 - Plan release schedule
 - Develop internet infrastructure
 - Provide forum for settling disputes

CDWG Change of Leadership

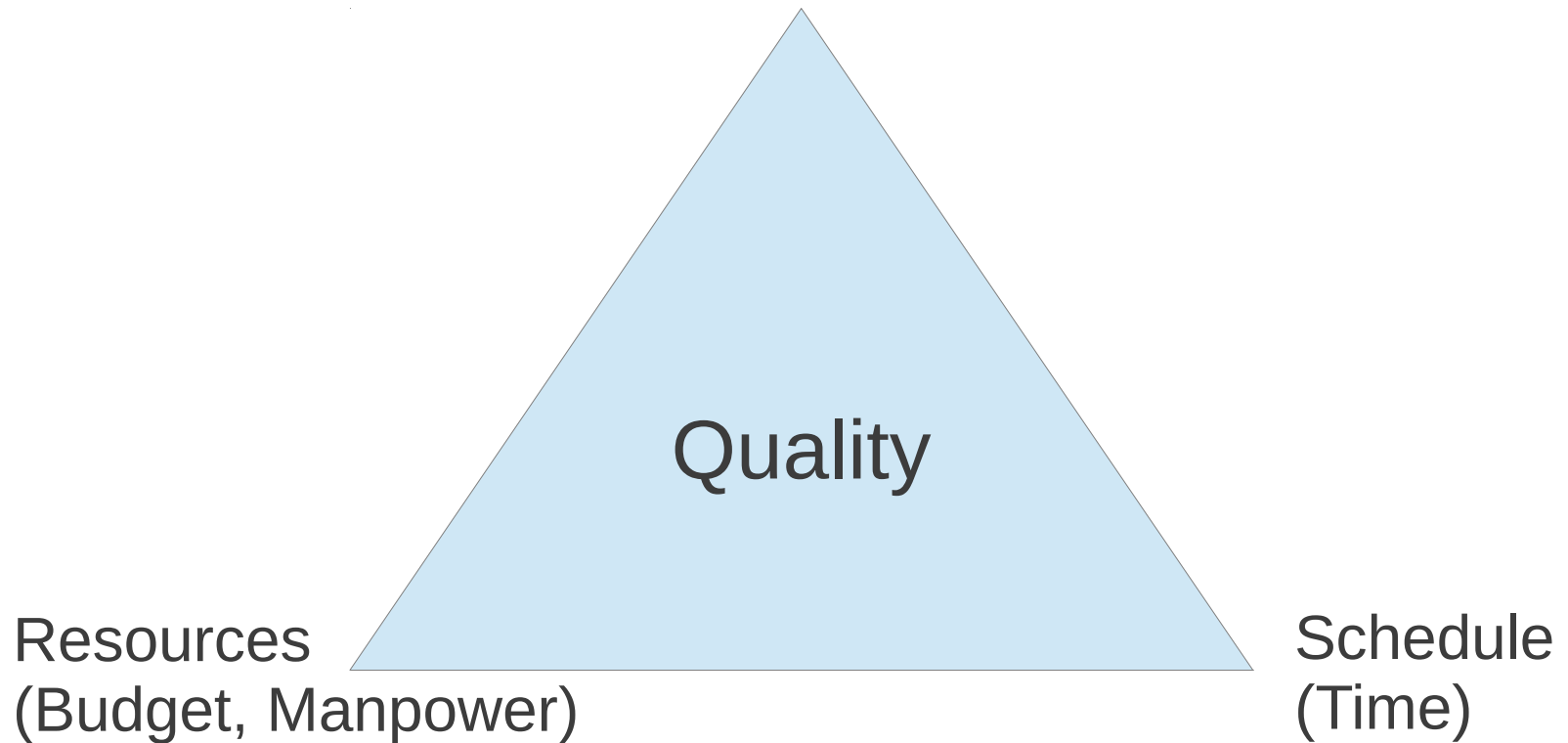
- Pam Hamilton (LLNL) led CDWG for ~2 years
- Recently stepped down



Lustre Software Development

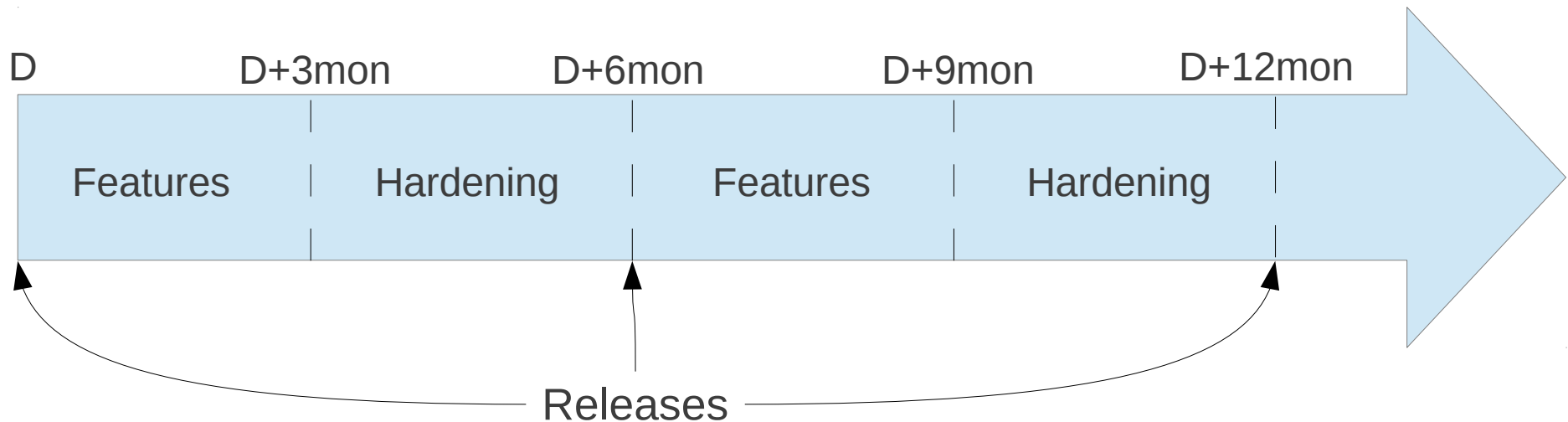
Software Development “Iron Triangle”

Scope (Features, Functionality)



Train Development Model

- Published schedule of release dates
- Features that miss the train get left behind



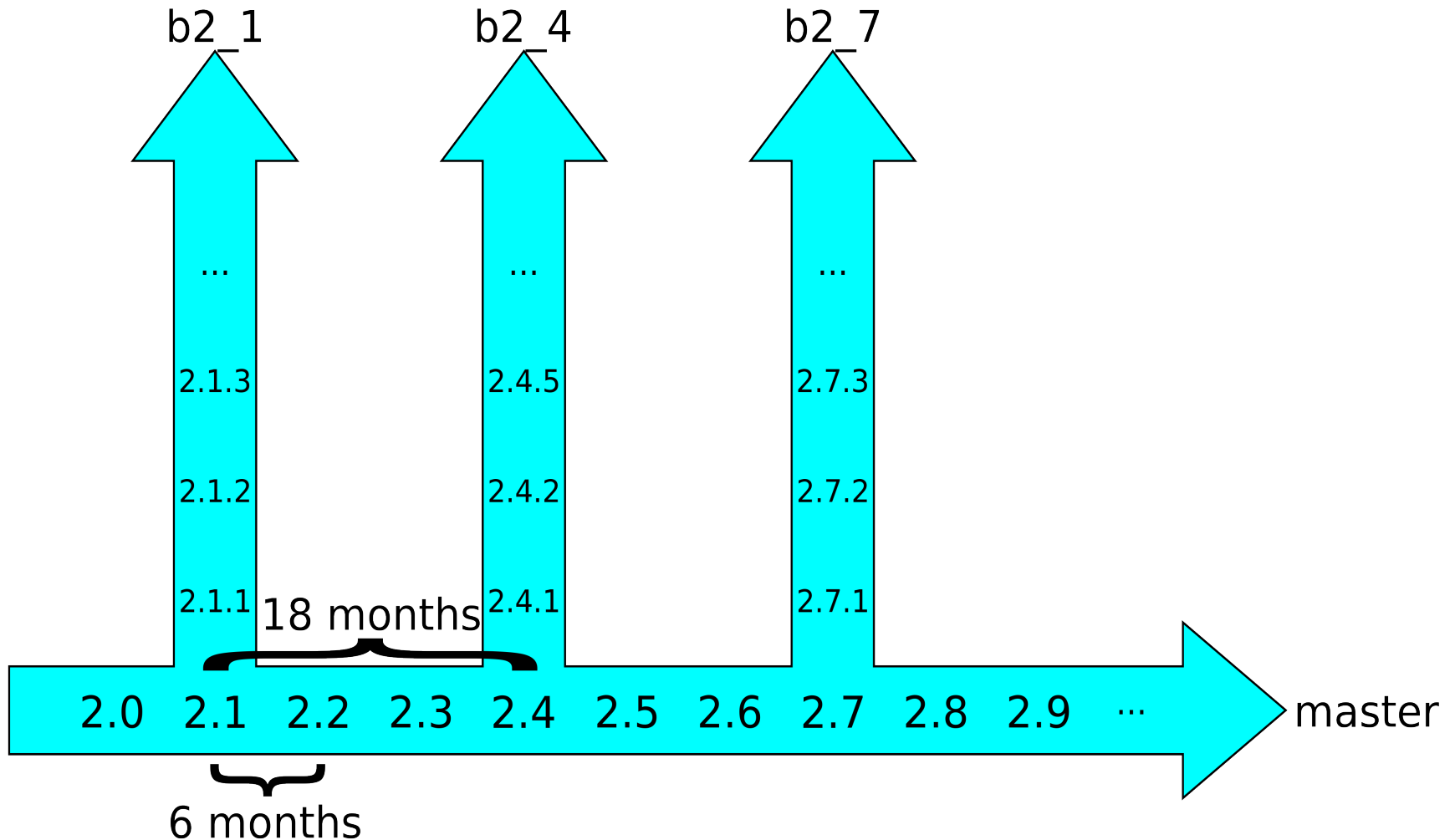
Advantages of Train Model

- Well known time table
 - Better coordination between organizations
 - More efficient scheduling of resources
- Avoids feature creep

Disadvantages of Model

- Timescale mismatch
 - Users often stick with one version for 3+ years
- Interoperability testing requirements grow exponentially
- Too few resources to patch more than 2 or 3 branches
- Would require fewer new features to maintain stability

Maintenance Branches



2012 Lustre Feature Releases

- Lustre 2.2.0 (March 30, 2012)
 - Improved Performance
 - Faster Recovery
 - Max stripe size increased to 2000 (was 160)
- Lustre 2.3.0 (October 22, 2012)
 - Object Index (OI) Scrub
 - Improved MDS SMP performance of shared dir

Lustre 2.4.0

- Feature release + begins maintenance branch
- Features
 - New OSD architecture
 - Stage 1 of Distributed NamespaceE (DNE1)
 - Lustre File System Check 1.5 (LFSCK 1.5)
 - Network Request Scheduler (NRS)
 - ZFS support

Lustre 2.4 Contributors

- Bull
- CEA
- Cray
- DDN
- EMC
- Fujitsu
- GSI
- Intel
- LLNL
- NASA
- NRL
- ORNL
- S&C
- Suse
- TACC
- Xyratex

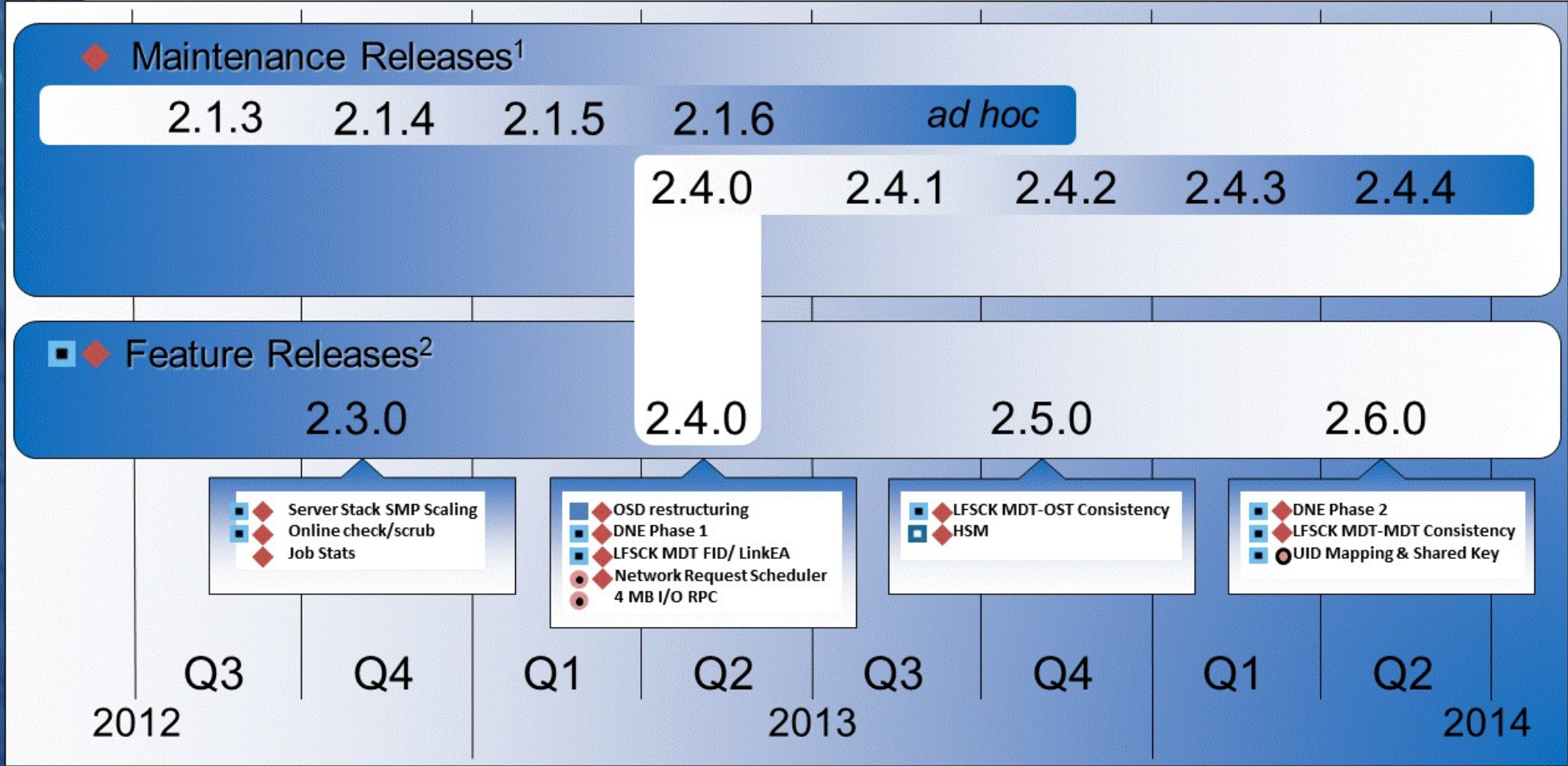
Lustre 2.5.0

- Feature Release
- Currently revising expected feature list
 - Join us to discuss!

What about Lustre 1.8.*?

- Original EOL planned for June 2012
- OpenSFS focusing on 2.1.x and newer
- Consult your Lustre support vendor if you need to continue using 1.8

Community Lustre Roadmap



Sponsors for Development and Releases: ● ORNL ■ OpenSFS ■ LLNL ◆ Intel
 ■ CEA ● Xyratex ● Indiana University

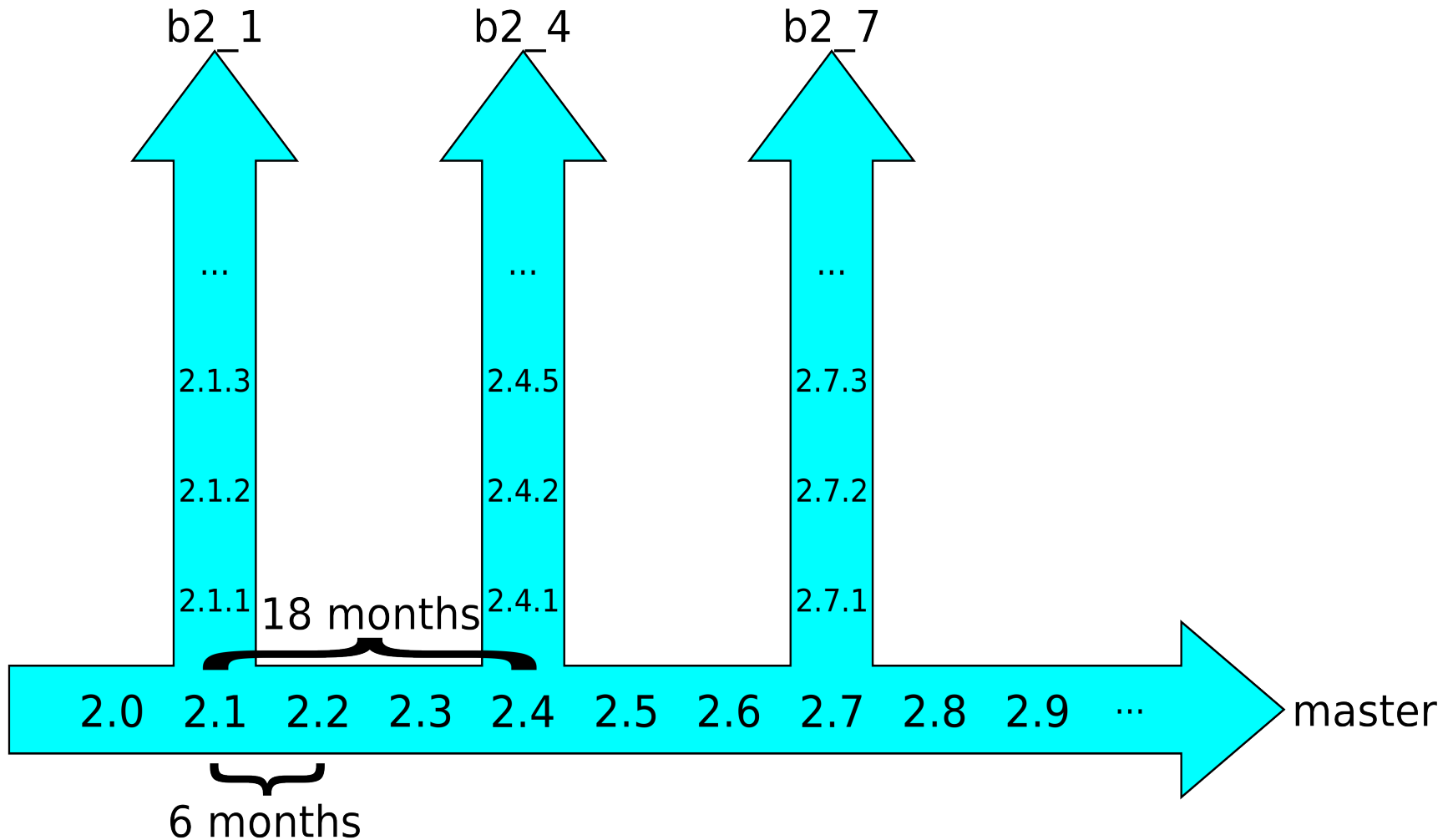
¹ Maintenance releases focus on bug fixes and stability. Updates to the current version are made at 3 month intervals. Updates to past versions will be made on an ad hoc basis.

² Feature releases focus on introducing new features. New release versions are expected at 6 month intervals. New maintenance versions from the feature release stream are anticipated at 18 month intervals.



Community Tree Development Contract

Lustre Branches



Community Tree Development Contract

- *Partially* funds care, testing, and development of *master* branch
- Granted to Whamcloud (now Intel) Nov. 2011
- Ongoing at OpenSFS/Intel mutual agreement
- Collection of requirements for refresh begun
 - http://wiki.opensfs.org/Community_Tree_Development_Contract

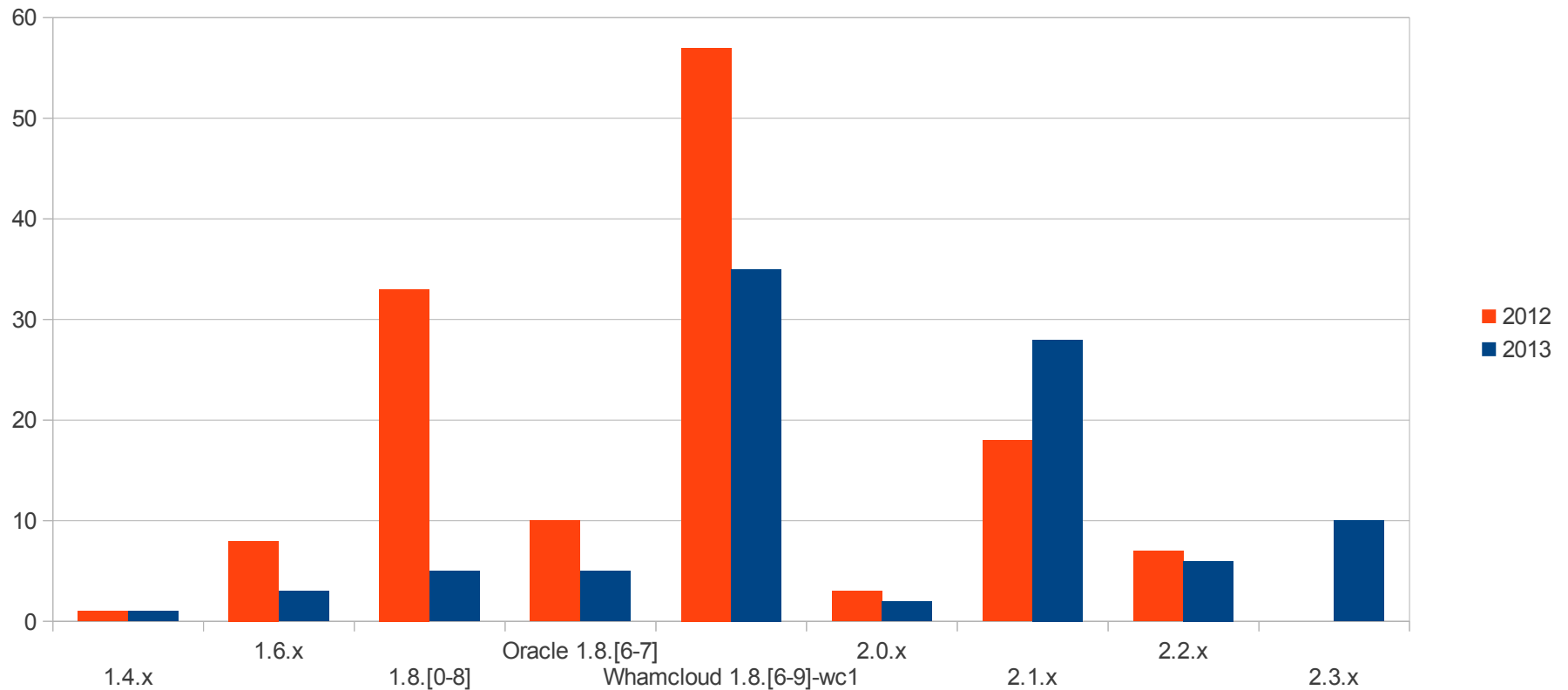


Lustre Community Survey

2013 Lustre Community Survey

- 2012
 - 90 people completed survey
 - 109 uses of 1.8 or older
 - 28 uses of 2.0 or newer
- 2013
 - 73 people completed survey
 - 49 uses of 1.8 or older
 - 46 uses of 2.0 or newer

Versions of Lustre Installed



Lustre Survey 2013

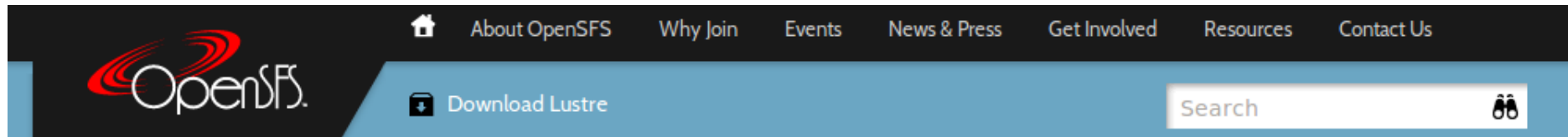
- 33% of respondents have formal support



Web Infrastructure

New OpenSFS Website

<http://www.opensfs.org>



Events

OpenSFS organizes and sponsors multiple open source file system events throughout the year. We pull together Lustre superstars and move forward roadmap discussions. If you are interested in participating on any level, please contact us for more information.

UPCOMING EVENTS

Lustre User Group (LUG) 2013

[LUG 2013](#) will be in San Diego April 15 - 19, 2013. (Includes arrival and registration Monday, April 15, full LUG sessions Tuesday through Thursday, and departure Friday, April 19th.)

Lustre Links

- [Join a Mailing List](#)
- [Get started with Lustre](#)
- [Read Documentation](#)
- [Download Lustre](#)
- [Submit an Issue](#)
- [Lustre Wiki](#)



Lustre Portal

<http://lustre.opensfs.org>

LUSTRE
COMMUNITY



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Welcome to the Lustre Community Portal

Lustre is an open-source, parallel file system that supports many requirements of leadership class HPC simulation environments. Whether you're a member of our diverse development community or considering Lustre as a parallel file system solution, this portal offers a wealth of resources and support to meet your needs.

Lustre: The basics

- [Community Lustre Roadmap](#)



Upcoming Events

APR
3
Wed

9:00 am CDWG Call

APR
10
Wed

9:00 am CDWG Call

APR
15
Mon

All Day LUG 2013 @
Omni Hotels & Resorts



OpenSFS and Lustre Wiki

<http://wiki.opensfs.org>



Main page

- OpenSFS
 - Website
 - Participants
 - Working Groups
 - Contracts
 - Infrastructure

- Lustre
 - Development

Toolbox

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Community Development Working Group

Basic information about the CDWG including details about the email list and conference calls are located at opensfs.org.

The CDWG has crafted the [Community_Tree_Development_Contract](#) and is working on updates. The CDWG has also crafted the maintenance and feature release strategy for the [Community Lustre Roadmap](#).

Also, there is an effort started to improve testing and quality assurance, see [Improving_the_test_framework](#).

Resources

- [CDWG Mailing List](#)

Meeting Minutes





We need YOU!

Ways You Can Contribute

- **Testing**
- Contribute to web sites and documentatinon
- Roadmap development
- Prioritize landings

Resources:

<http://wiki.opensfs.org/CDWG>

<http://lustre.opensfs.org>

