

LUG 2016 LUSTRE USER GROUP April 5 - 7 | Portland, OR



Welcome!

Welcome to the 14th Annual Lustre User Group Conference. As key stakeholders in the open source file system community, your participation and input is invaluable. This conference is our primary venue for discussions and seminars on open source parallel file system technologies.

While you are here, we invite you to:

Learn, Share, Develop Best Practices, Provide Feedback to Developers, and Provide Feedback to LUG Organizers

Agenda

LUG will feature three days of sessions, as well as a number of ways to engage with attendees, customers, and industry representatives.

Presentations

- All presentations will be held in the Pavilion Ballroom
- All sponsor exhibit tables will be located in the Plaza Foyer

Meals

Breakfasts will be served in the Plaza Foyer and Broadway I/II/III, and lunches will be served in Skyline I/II (23rd Floor). The networking reception on Day 1 will be held in the Plaza Foyer.

- Breakfast will be served on Days 1, 2 and 3, and lunch will be served on Days 1 and 2
- Snacks will be provided during morning and afternoon breaks in the Plaza Foyer

LUG 2016 Planning Committee

Aurélien Degrémont - CEA Henri Doreau - CEA Stephen Simms - Indiana University Peter Jones - Intel Mark Gary - Lawrence Livermore National

Mark Gary - Lawrence Livermore National Laboratory

Parks Fields - Los Alamos National Laboratory Sarp Oral - Oak Ridge National Laboratory

Steve Monk - Sandia National Laboratories

Stephane Thiell - Stanford

Tuesday, April 5 • Day 1

7:30am - 9:00am	Registration & Breakfast
9:00am - 9:05am	Welcome Remarks Stephen Simms OpenSES
9:05am - 9:20am	Lustre 101: A Quick Overview
9:20am - 9:50am	Community Release Update
9 [.] 50am - 10 [.] 20am	Lustre 2.9 and Beyond
	Andreas Dilger, Intel
10:20am - 10:45am	Distribution of Lustre Christopher Morrone and Giuseppe Di Natale, Lawrence Livermore National Laboratory
10:45am - 10:50am	LMT: It's Only A Flesh Wound Olaf Faaland, Lawrence Livermore National Laboratory
10:50am - 11:10am	Break
11:10am - 11:25am	Enhancing Lustre Security with the Whitelist/Blacklist Patch Josh Judd, Warp Mechanics
11:25am - 11:55am	Lustre Security Infrastructure Today and Tomorrow John Hammond, Intel
11:55am - 12:25pm	Security Isolation for Lustre
12:25pm - 1:25pm	Lunch
1:25pm - 1:40pm	Lustre Update from Seagate Peter Bojanic, Seagate
1:40pm - 2:10pm	Large Streaming IO for Lustre on ZFS Jinshan Xiong, Intel
2:10pm - 2:40pm	Lustre ZFS Snaphots Fan Yong, Intel
2:40pm - 3:10pm	Vectorized ZFS RAIDZ Implementation Gvozden Nešković, Frankfurt Institute for Advanced Studies
3:10pm - 3:40pm	Break
3:40pm - 3:55pm	Status of the Upstream Client James Simmons, Oak Ridge National Laboratory
3:55pm - 4:10pm	Removing Technical Debt Ben Evans, Cray
4:10pm - 4:25pm	Intel(r) Solutions for Lustre* Software: Update Jessica Popp, Intel
4:25pm - 4:55pm	Lustre.Org – A Community Resource Ken Rawlings, Lustre.org Working Group OpenSFS Liaison
4:55pm - 5:25pm	OpenSFS and EOFS Update Charlie Carroll, OpenSFS Frank Baetke, EOFS

Wednesday, April 6 • Day 2

8:00am - 9:00am	Registration & Breakfast
9:00am - 9:30am	Lustre in a Condo Computing Environment John White, Lawrence Berkeley National Laboratory
9:30am - 10:00am	Lustre Deployed Three Different Ways to Meet Researchers' Needs Scott Yockel, Harvard University
10:00am - 10:15am	Tiering Storage (around Lustre) for Big Data and Supercomputing: Cray's Portfolio of Offerings Jason Goodman, Cray Inc.
10:15am - 10:45am	The 1 Million IOPS Lustre File System at TU Dresden Michael Kluge, Technische Universität Dresden Johann Peyrard, Atos
10:45am - 11:15am	Break
11:15am - 11:30am	Building Lustre Solutions with NVM Devices Today James Coomer, DataDirect Networks
11:30am - 12:00pm	Lustre Deployment using Intel OmniPath Interconnect Brian Johanson, Pittsburgh Supercomputing Center
12:00pm - 12:30pm	InfiniBand At A Distance Steve Woods, Cray Dave McMillen, Cray
12:30pm - 1:30pm	Lunch
1:30pm - 2:00pm	Multi-rail LNet for Lustre Amir Shehata, Intel Olaf Weber, SGI
2:00pm - 2:15pm	A New Approach to Lustre – Join HPE for a Look at the Future of Optimized Lustre Environments Craig Belusar, Hewlett Packard Enterprise
2:15pm - 2:45pm	An Architecture for Docker on Lustre Blake Caldwell, Oak Ridge National Laboratory
2:45pm - 3:15pm	Scaling Apache Spark on Lustre Nicholas Chaimov, University of Oregon
3:15pm - 3:45pm	Break
3:45pm - 4:15pm	Scaling LDISKFS for the Future Artem Blagodarenko, Seagate
4:15pm - 4:45pm	DL-SNAP: A Directory Level SNAPSHOT Facility on Lustre Shinji Sumimoto, Fujitsu
4:45pm - 5:45pm	Board Q&A Panel OpenSFS Board Members

Thursday, April 7 • Day 3

8:00am - 9:00am	Registration & Breakfast
9:00am - 9:30am	Developing an Open Source Object Storage Copytool for HSM on Lustre Frederick Lefebvre, Calcul Québec Simon Guilbault, Calcul Québec
9:30am - 10:00am	Lustre Data Mover: Because File Systems are Rooted Trees and rsync Must Die Rick Wagner, San Diego Supercomputer Center
10:00am - 10:30am	Break
10:30am - 11:00am	Project Quota for Lustre Li Xi, DDN
11:00am - 11:30am	ASCAR: Increasing Performance Through Automated Contention Management Yan Li, University of California, Santa Cruz
11:30am - 12:00pm	Evaluating Progressive File Layouts for Lustre Richard Mohr, University of Tennessee, Knoxville
12:00pm - 12:10pm	Closing
12:10pm	End of LUG 2016

Join the OpenSFS Community

OpenSFS ensures the health and stability of open source file systems, a key HPC technology and an important component in a growing list of non-HPC markets.

Our goal is the continued evolution of robust open source file systems for - and under - the control of the HPC community.

Your involvement is essential to the future of OpenSFS.

Visit our website for more information: www.opensfs.org



About OpenSFS: OpenSFS (Open Scalable File Systems) is a strong and growing nonprofit organization dedicated to the success of the Lustre® file system. OpenSFS was founded in 2010 to advance Lustre development, ensuring it remains

vendor-neutral, open, and free. Since its inception, OpenSFS has been responsible for advancing the Lustre file system and delivering new releases on behalf of the open source community. Through working groups, events, and ongoing funding initiatives, OpenSFS harnesses the power of collaborative development to fuel innovation and growth of the Lustre file system worldwide.



Flash your data forward Automated data management for high-velocity big data workflows

THE REAL PROPERTY.

www.cray.com



National Labs



PROVEN

PERFORMANCE

& RELIABILITY.

The Largest

Lustre[®] Reseller

OUTSIDE INTEL®

Highest

Performance

Lustre Branch

AWARD-WINNING SUPPORT

Most optimized Lustre appliance

BEST MIXED IO PERFORMANCE

Accelerating analysis



10 of the Forbes 10 World's Most Valuable Brands gain insights and create value with Hewlett Packard Enterprise big data solutions.

Accelerating next

Hewlett Packard



Enterprise

hpe.com/analysis

© Copyright 2016 Hewlett Packard Enterprise Development LP. Source: Forbes Most Valuable Brands 2015; HPE Customers 2013 Q3 - 2015 Q2.



INTEL® ENTERPRISE EDITION LUSTRE* SOFTWARE

An element of Intel[®] Scalable System Framework

Discover more at intel.com/lustre



Copyright © Intel Corporation 2016. All rights reserved. Intel and the Intel logo are trademarks of Intel Corporation in the U.S. and/or other countries. *Other names and brands may be claimed as the property of others

The #1 HPC Storage Choice for New Supercomputers!



SEAGATE

Seagate Technology LLC, 10200 South De Anza Boulevard, Cupertino CA 95014 U.S.A. + 1-866-766-2166 @ 2015 Seagate Technology LLC. All rights reserved. Seagate. Seagate Technology, and the Wave logo are trademarks or registered trademarks of Seagate Technology LLC. All rights companies in the United States and/or other countries. Seagate reserves the right to change, without notice, product offerings or specifications.



We hope you enjoyed LUG 2016 and welcome your input! Complete the LUG Conference survey for your chance to win a *Kindle Fire HD Tablet, Amazon Echo,* or *a GoPro Hero Camera.* LUG 2016 is Made Possible by our Generous Sponsors

Gold Sponsors







intel)



Silver & Internet Sponsor



Silver Sponsors





www.opensfs.org