



OpenZFS

DEV. **SUMMIT**

2014 / 10-11 NOV.
SAN FRANCISCO





OpenZFS

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Global Leader in Software-Defined Storage.



Thank you! Additional sponsors:



ClusterHQ

Container Data Management



HIGH AVAILABILITY



syneto

YOUR DATA • OUR BUSINESS





Thank you! Outstanding Individuals:

Aaron Holding for the T-Shirt design

Chris Siden, Basil Crow, and Max Grossman for selecting and acquiring the beer for the Beer Bash

Roman Sochan for webcasting and video recording

Delphix PM team: **Anastasiya Dubrovina, Karyn Ritter,** and **Ann Togasaki** for organizing everything (food, sponsors, venue, ...)



OpenZFS: 2014 in review : Features

- zvol unmap (and other types of freeing) performance
- allocation performance (free space histogram)
- lz4 compression of metadata
- embedded block pointers
- property to limit number of filesystems/snapshots
- redundant_metadata=most
- bookmarks for incremental sends
- zfs send/rcv performance work (half the time)
- zfs list -p (parseable)
- large block support (up to 16MB)



Presentation



2013 Hackathon



OpenZFS: 2014 in review : Events

- **2013 OpenZFS Developer Summit**  **Organized**
- LISA 2013
- UKOUG Tech13
- **OpenZFS Office Hours (2x - George W. and Brian B.)**
- UKOUG Solaris SIG
- IEEE Computer Society of Silicon Valley
- AsiaBSDcon
- BSDCAN
- dotScale
- **OpenZFS European Conference**  **Organized**
- EuroBSDcon





OpenZFS: What does 2015 hold?

- **compressed ARC**
- reduced L2ARC memory overhead
- cached read performance (arc list lock)
- **device removal**
- zfs send/rcv performance work (prefetching)
- zfs send rebase (incremental from unrelated snapshot)
- resumable send/receive (really!)
- **allocation perf (dynamic metaslab, hole fill, incremental allocation)**
- persistent L2ARC
- improved import/startup performance
- **channel programs**
- prefetch performance (predictive prefetch, indirect prefetch)
- sub-block write performance (?)
- **clone individual files**



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- prefetch performance (with, indirect prefetch)
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2013 Hackathon

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OpenZFS: What does 2015 hold?

Scale Up



OpenZFS: What does 2015 hold?

Scale Up

more memory (1TB+)

more storage (1PB+)

more computers (cloud, replication)

more platforms

more contributors!



OpenZFS: What does 2015 hold?

Help OpenZFS scale by scaling up your involvement

- upstream changes
 - why?
- infrastructure
 - test suite improvements
 - platform-independent repo
 - reduce platform difference
 - shim layers
 - common coding guidelines

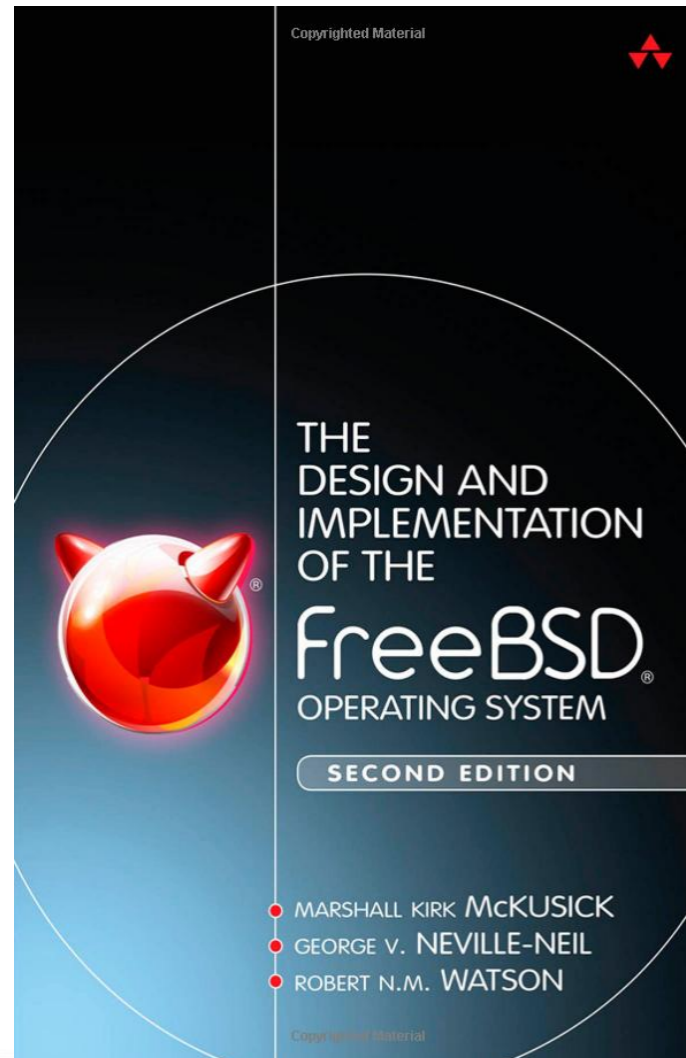


Agenda Monday, November 10

9:00am - 9:30am	Breakfast/Registration
9:30am - 9:40am	Keynote (Matt Ahrens from Delphix)
9:40am - 10:10am	Platform Overview: ZFS on OSv (Raphael Carvalho from Clouddius)
10:10am - 10:40am	Platform Overview: ZFS on Linux (Brian Behlendorf from LLNL)
10:40am - 10:50am	Platform Overview: illumos (Prakash Surya from Delphix)
10:50am - 11:00am	Platform Overview: FreeBSD (Xin Li from iXsystems)
11:00am - 11:30am	Platform Panel Q&A (All)
11:30am - 12:15pm	Lunch
12:15pm - 12:45pm	Manta (Dave Pacheco from Joyent)
12:45pm - 1:00pm	Compression (Saso Kiselkov from Nexenta)
1:00pm - 1:30pm	Performance (George Wilson from Delphix)
1:30pm - 2:00pm	Coffee & Snack Break
2:00pm - 2:30pm	Host-Aware SMR (Tim Feldman from Seagate)
2:30pm - 3:00pm	Fast File Cloning (Pavel Zakharov from Imation)
3:00pm - 3:30pm	Device Removal (Alex Reece & Matt Ahrens from Delphix)
3:30pm - 3:45pm	libzfs_core and ioctl stabilization (Richard Yao from ClusterHQ)
3:45pm - 4:00pm	Channel Programs (Chris Siden from Delphix)
4:00pm - 4:30pm	Coffee & Snack Break
4:30pm - 5:45pm	Company Lightning Talks (Various)
5:45pm - 5:55pm	Closing (Matt Ahrens from Delphix)
6:00pm - 8:00pm	Beer Bash & Casual Dinner



Thanks to Kirk McKusick for Q&A Prize!





platform talks now



Headcounts

Tuesday Hackathon

Tuesday Dinner at Thirsty Bear



Company Lightning Talks: 8-10 mins each

1. Coraid
2. DDRdrive
3. Delphix
4. iX Systems
5. Nexenta
6. Storiant
7. Syneto
8. Zacodi Labs
9. ClusterHQ

insert company slide decks here



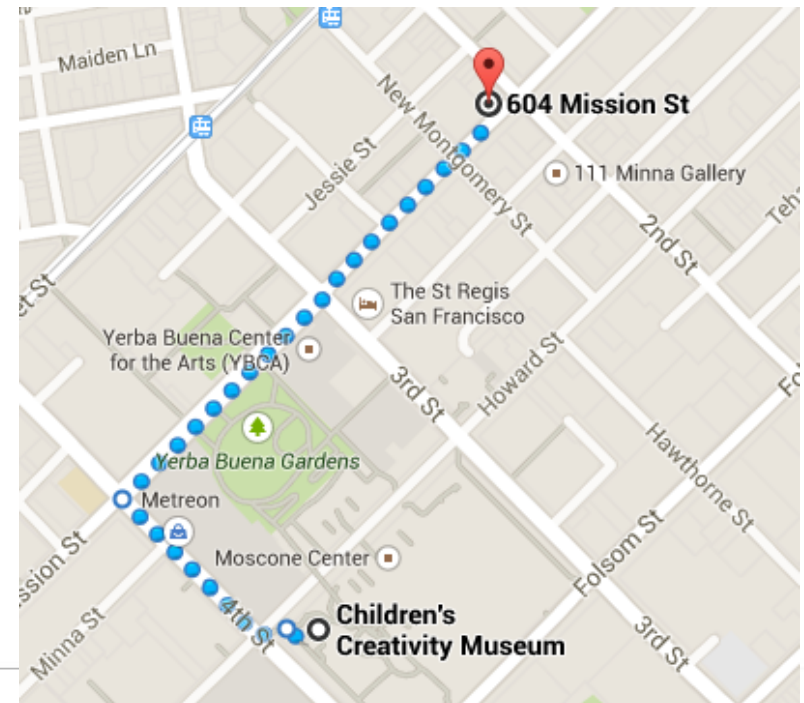
Tuesday Location

The hackathon will take place at the Delphix San Francisco Office (10 min walk from Children's Museum)

604 Mission Street, 4th floor, San Francisco, CA 94105

Breakfast at 9:00am

Hackathon begins at 9:30am



end of day 1



Agenda Tuesday, November 11

9:00am - 9:30am	Breakfast
9:30am - 11:00am	Hackathon
11:00am - 11:15am	Coffee & Snack Break
11:15am - 12:00pm	Hackathon
12:00pm - 1:00pm	Lunch
1:00pm - 2:30pm	Hackathon
2:30pm - 2:45pm	Coffee & Snack Break
2:45pm - 4:30pm	Hackathon
4:30pm - 5:30pm	Hackathon Presentations and Awards
6:00pm - 8:00pm	Optional Dinner at Thirsty Bear



Thanks to Nexenta for Hackathon Prizes!



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