

# **Growing-up with Lvstre!**

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# Welcome to L≠UG!

This *is* a marketing presentation, dedicated to...



It's *not* Human, it's a Beast!

But, *what* beast?

I think it's a hedgehog...



*"The fox knows many things, but the hedgehog knows one big thing."*

Maybe it's a hegdehog *wanting to become a fox? A **Foxhog**???*

# What *kind* of Beasts!

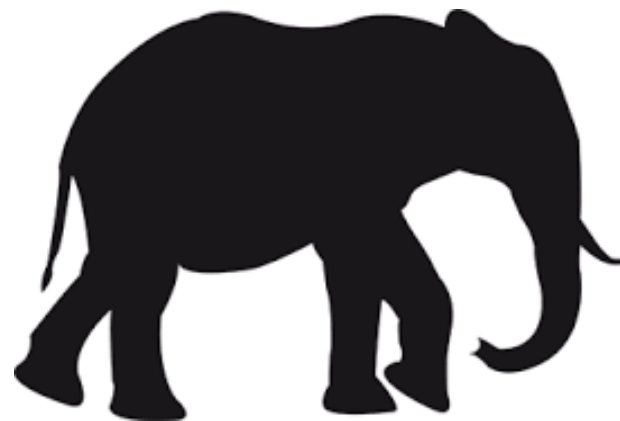
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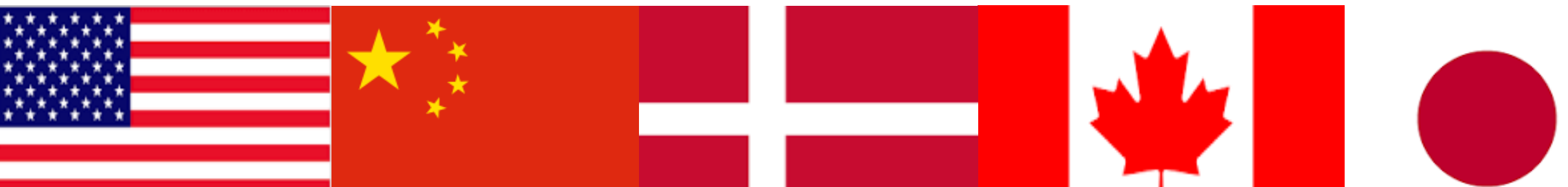
# Lustre is “Open Source”

“It might be conceivably-possibly-maybe-open!”

“We fixed 1500 bugs, but don’t tell anybody!!!”

“It will be all open, once patches are no more useful”

“What do you mean? *All source is always open!*”



# Why Lustre?

Only viable Open Source parallel file system that offers a globally consistent POSIX namespace

Small, but resilient user/developer community (including: resilient towards corporate politics!)

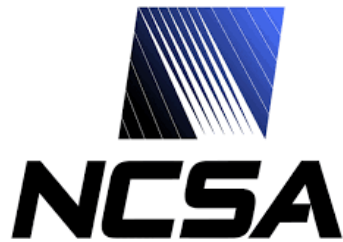
Focus on traditional HPC, but with an increasingly diverse user basis

Not “enterprise”, not an “appliance”, not controlled by a single vendor

# Growing-up with Lustre!

**2003**

1<sup>st</sup> Large Lustre System  
Implementation



**2009**

Launch of EXAScaler



**Today**

Diverse Customer Basis  
Broad Portfolio

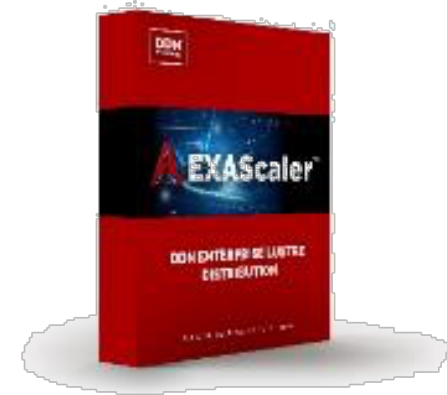
- Software-only
- ExaScaler “Appliances”
- ExaScaler on ZFS



# DDN | EXAScaler

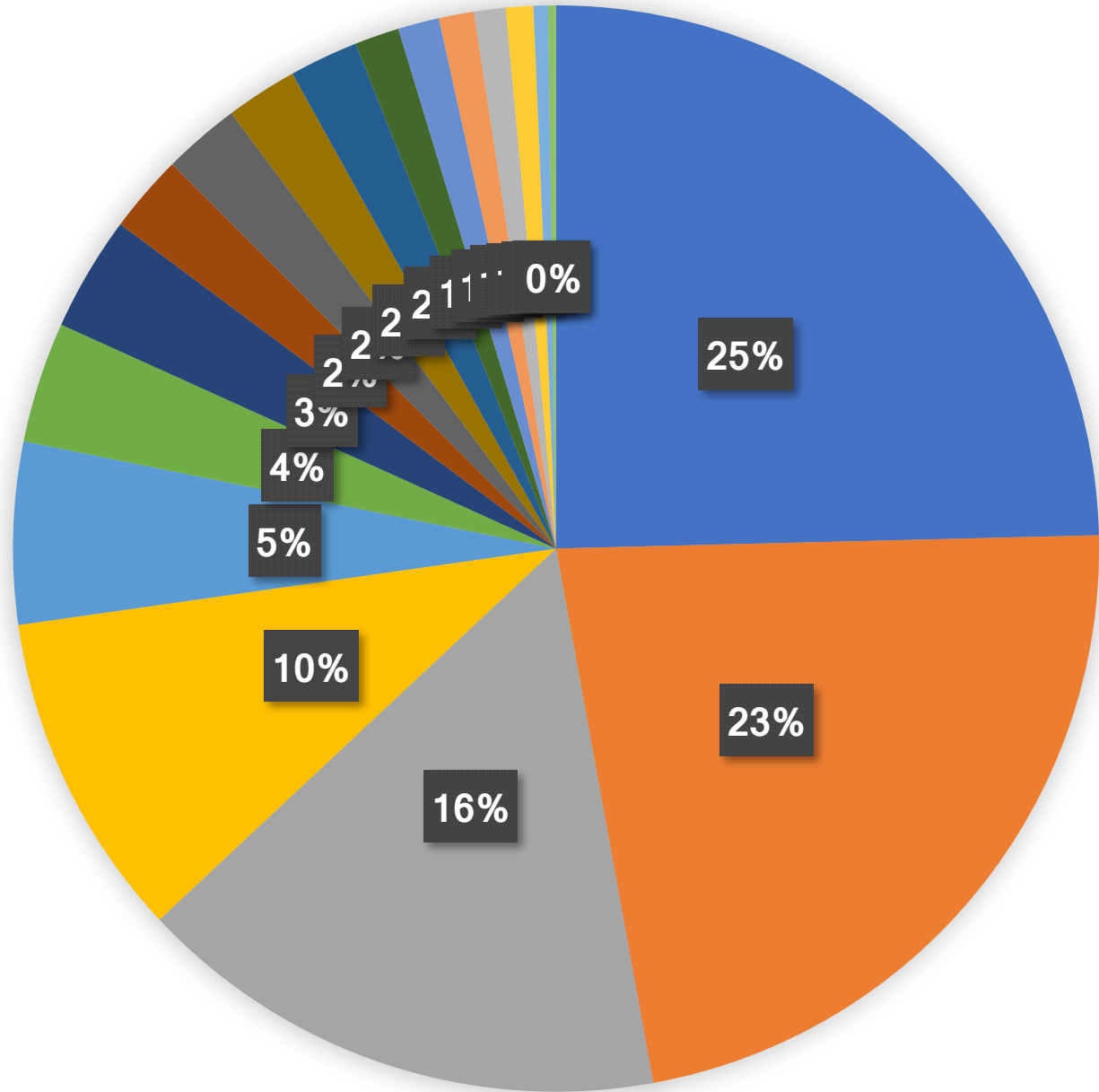
## Enterprise Lustre Distribution

- Based on most stable Lustre community distribution available
- Open Source with no forked code basis
- Extensive QA and Hardening
- Proven High-Availability
- Internally Developed Features
- Unique Tools
- Powerful Monitoring
- Optimizations for DDN Hardware
- Global Support – Level 1, 2, and 3



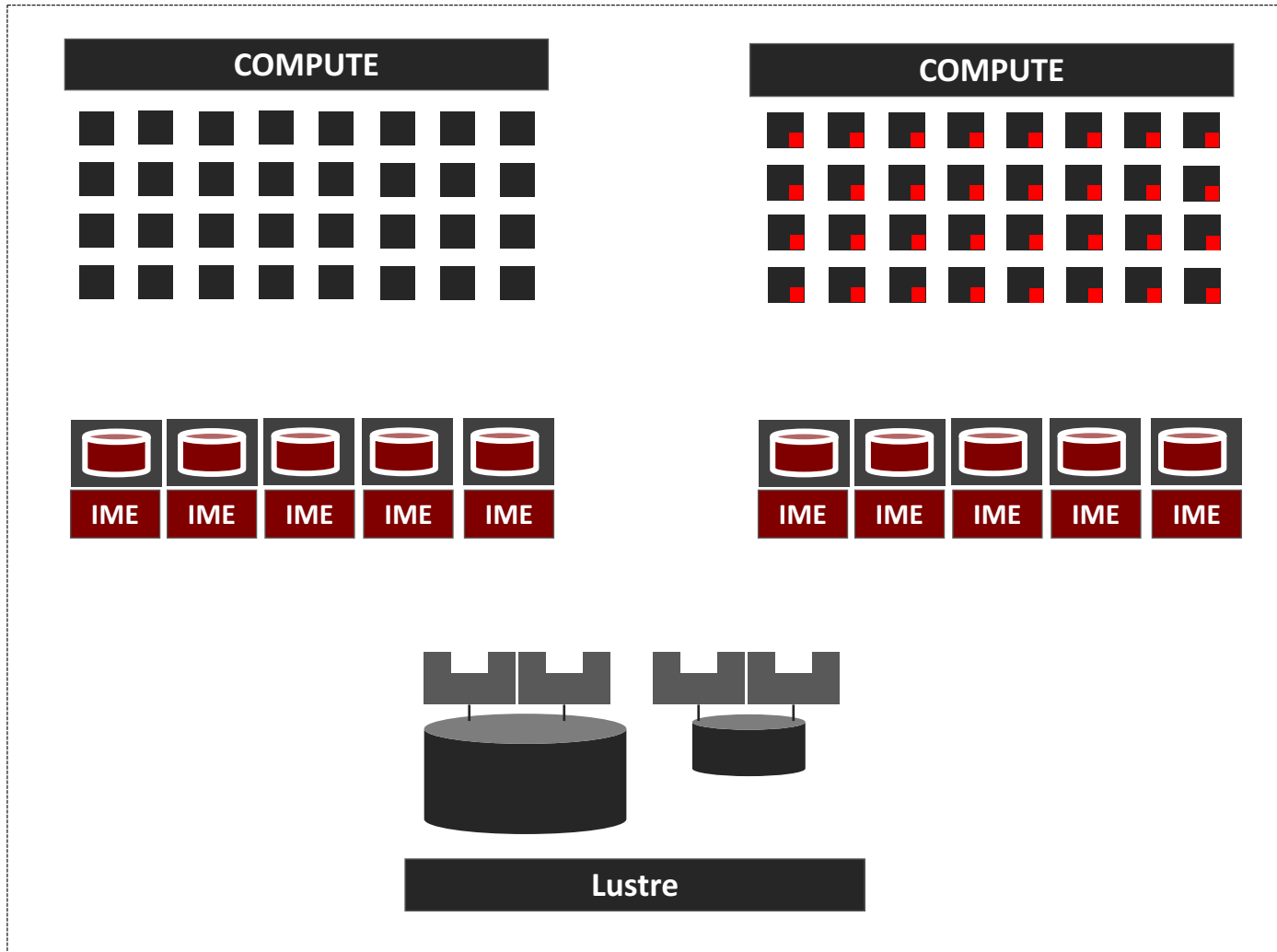


- LATEST (Lustre Automatic Test)
- Monitoring
- LIPE (Lustre Integrated Policy Engine)
- Monitoring Packager
- Lustre on Btrfs
- Bug Fixes
- L2RC (Lustre Level 2 Read Cache)
- Idsync
- MpiFileutils
- TBF NRS Policy
- Project Quota
- Parallel Readahead of Lustre
- Lustre Security
- Cinder Driver
- ladvice and dss/sfx
- Client Side QoS
- Subdirectory mount
- CoreOS+Lustre

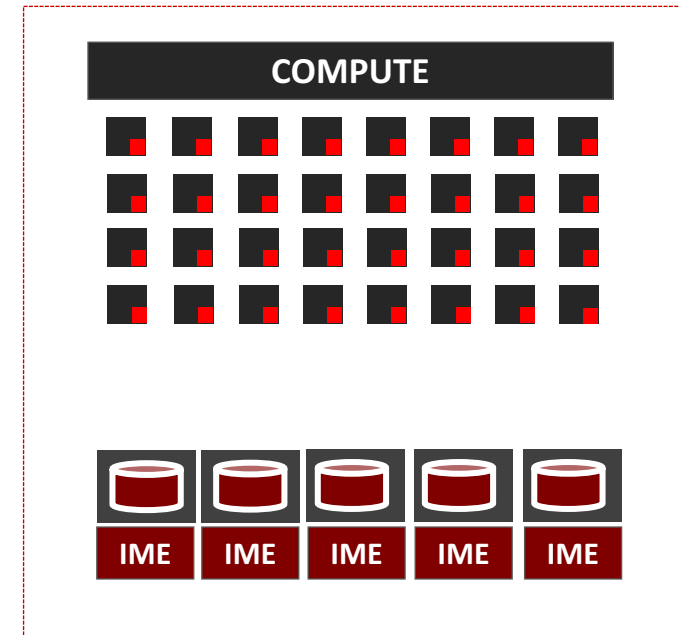


# Future Architectures

## POSIX Namespace



## Object Namespace



# Lustre, the Next 20 Years?

Globally-consistent POSIX namespaces will be around for a long simply time due to application lifetimes

Increased focus on data management, rather than pure performance

More focus on management, usability, logging, etc.

Remain a community-driven, open source effort

