TSC Update

DUG 2024

THE LINUX FOUNDATION

https://foundation.daos.io

daos

TSC Structure

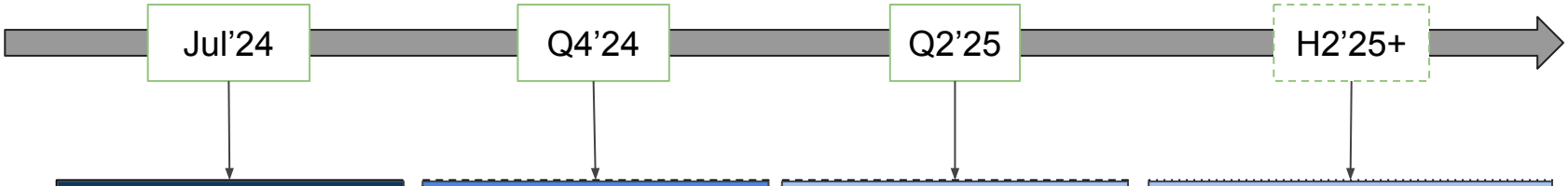
- Voting Members
  - *Argonne*: Kevin Harms
  - *Google*: corwin
  - *HPE*: Lance Evans
  - *Intel*: Liang Zhen
  - *Vdura*: Brian Mueller
  - *TSC Chair*: Johann Lombardi
- Meet weekly with rotating schedule
  - Members distributed across US, EU, China and Australia
- Meeting notes to be public

TSC Scope

- Define community roadmap (2.8+)
  - Gather contributions from all community members
  - Publish roadmap on https://daos.io
- Produce community releases (2.8+)
  - Track progress, review jira tickets & test results
  - Tag release and sign/distribute packages
  - Provide docker images
- Organize DAOS development
  - Simplify contributions
  - Organize gatekeeping (members, responsibilities, process)
  - Document contribution process

TSC Scope

- Community test infrastructure
  - Goal: artifacts and logs available to all contributors
  - Expand coverage
    - ARM/AMD
    - More fabrics
    - More linux distributions
    - Cloud environments
    - Focus on pmem-less mode
- Working groups
  - Open to anyone
  - Forums for DAOS users/administrators/contributors to exchange
  - Rotating schedule



DAOS 2.6
(Intel Release)

OS Packages:
- Leap 15.5
- RHEL/Rocky/Alma 8.8/9.2

Networking:
- Change provider w/o reformat
- MD duplicate RPC detection

Features:
- Non-pmem support phase 1
- libpil4dfs
- Intel VMD hotplug
- Delayed rebuild

Tech preview:
- Distributed consistency checker

UX Improvements:
- Improved version interoperability

DAOS 2.8
(DAOS Foundation Release)

OS Packages:
- Leap 15.6
- RHEL/Rocky/Alma 8.10/9.4

Networking:
- VNI support

Features:
- Optimized object placement
- Mount POSIX snapshots RO
- Client telemetry

Tech preview:
- **Non-pmem support phase 2**
- Pytorch data loader
- Incremental rebuild/reintegration

UX Improvements:
- Reintegration of all pools
- daos pool listing

DAOS 3.0
(DAOS Foundation Release)

OS Packages:
- Leap 15.6 (x86_64)
- RHEL/Rocky/Alma 8.10
- Ubuntu 22.04 client
- RHEL/Rocky/Alma 9.x (ARM64/x64_64)

Networking:
- Multihomed network support
- DOCA-OFED support

Features:
- Non-pmem support phase 2
- WORM containers
- Container parking/serialization
- Distributed consistency checker
- Fault domains beyond servers
- Engine scalability improvements

Tech preview:
- Rolling upgrade
- Omni-Path Express support

Future Releases
(DAOS Foundation Release)

OS Packages:
- Leap 15.7
- RHEL/Rocky/Alma 8.10
- Ubuntu 22.04
- RHEL/Rocky/Alma 9.x (ARM64/x64_64)

Features:
- Pool resizing
- Inline compression (QAT)
- Inline encryption (QAT)
- Inline deduplication
- Middleware consistency checker
- Progressive layout
- Pipeline API
- SQL support with predicate pushdown
- Distributed transactions
- Pool/container freeze
- CXL SSD support / QLC
- Tiered container phase 1
- Support for multiple DAOS systems
- hardlinks support in libdfs
- flock support in libdfs
- network multipath support
- DSA optimizations

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Color coding schema:
- Committed (or released) release/features
- In-planning release/features
- Future possible release/features

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2.8 Plan

- 2.8 milestones
  - Test builds
  - Feature freeze
  - Code freeze
  - Release candidates
  - Release: shooting for Q4’24
- Generate more release candidates
  - Give opportunity for more community testing
- Train model

3.0 Plan

- Rolling upgrade as the main feature
  - Protocol change
- Defining features to be contributed by different partners
  - High level designs
- Train model

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