Welcome

Kelsey Prantis, Senior Software Engineering Manager

Notices and Disclaimers

Intel technologies' features and benefits depend on system configuration and may require enabled hardware, software or service activation. Performance varies depending on system configuration.

No product or component can be absolutely secure.

Tests document performance of components on a particular test, in specific systems. Differences in hardware, software, or configuration will affect actual performance. For more complete information about performance and benchmark results, visit http://www.intel.com/benchmarks .

Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products. For more complete information visit http://www.intel.com/benchmarks .

Intel Advanced Vector Extensions (Intel AVX) provides higher throughput to certain processor operations. Due to varying processor power characteristics, utilizing AVX instructions may cause a) some parts to operate at less than the rated frequency and b) some parts with Intel® Turbo Boost Technology 2.0 to not achieve any or maximum turbo frequencies. Performance varies depending on hardware, software, and system configuration and you can learn more at http://www.intel.com/go/turbo.

Intel's compilers may or may not optimize to the same degree for non-Intel microprocessors for optimizations that are not unique to Intel microprocessors. These optimizations include SSE2, SSE3, and SSSE3 instruction sets and other optimizations. Intel does not guarantee the availability, functionality, or effectiveness of any optimization on microprocessors not manufactured by Intel. Microprocessor-dependent optimizations in this product are intended for use with Intel microprocessors. Certain optimizations not specific to Intel microarchitecture are reserved for Intel microprocessors. Please refer to the applicable product User and Reference Guides for more information regarding the specific instruction sets covered by this notice.

Cost reduction scenarios described are intended as examples of how a given Intel-based product, in the specified circumstances and configurations, may affect future costs and provide cost savings. Circumstances will vary. Intel does not guarantee any costs or cost reduction.

Intel does not control or audit third-party benchmark data or the web sites referenced in this document. You should visit the referenced web site and confirm whether referenced data are accurate.

Agenda

Time (CT)	Presentation
9:30am	Gathering
9:35am	**Welcome & DAOS Update** Kelsey Prantis, DAOS team manager, Intel DPG
9:45am	**Accelerating Apache Spark with DAOS on Aurora** Carson Wang, Software Engineering Manager, Intel IAGS
10:00am	**Online data compression in DAOS with Intel QAT** Weigang Li, Software engineer, Intel NPG
10:15am	**DAOS Feature Update** Liang Zhen, DAOS architect, Intel DPG
10:35am	**Very Early Experiences with a 0.5 PByte DAOS Testbed** Steffen Christgau, Supercomputing dept., Zuse Institute Berlin Tobias Watermann, Supercomputing dept., Zuse Institute Berlin Thomas Steinke, Supercomputing dept., Zuse Institute Berlin
10:50am	**DAOS Adventures at CERN Openlab** Miguel F. Medeiros, Computer Engineer, CERN
11:05am	**Storing High-Energy Physics data in DAOS** Javier Lopez Gomez, Fellow, CERN

Time (CT)	Presentation
11:20am	**DAOS-SEGY Mapping** Merna Moawad, Associate Software Engineers, Brightskies
11:35am	**DAOS Middleware Update** Mohamad Chaarawi, DAOS architect, Intel DPG
11:50am	**Storage Orchestration for Composable Storage Architectures** Pavel Lavrenko, Chief Business Development Officer, RSC Group
12:05pm	**Platform Performance Evolution from bring-up to reaching link saturation – Learning from Reference Storage Platform** Sarika Mehta, Storage Performance Engineer, Intel NSG
12:20pm	**DAOS in Lenovo's HPC Innovation Center** Michael Hennecke, Chief Technologist, HPC Storage and Networking, Lenovo
12:35pm	**HPE's DAOS Solution Plans** Lance Evans, HPE HPC CTO Chief Storage Architect
12:50pm	**Closing remarks** Kelsey Prantis, DAOS team manager, Intel DPG

- Reminder: we have a very full agenda; agenda times will be strictly enforced
- All sessions today will be recorded and posted on our YouTube channel at https://bit.ly/3pHHxcL

DAOS Community Roadmap

DAOS:
- NVMe & DCPMM support
- Per-pool ACL
- UNS in DAOS via dfuse
- Replication & self-healing (Preview)

Application Interface:
- MPI-IO Driver
- HDF5 DAOS Connector
- Basic POSIX I/O support

DAOS:
- End-to-end data integrity
- Per-container ACL
- Improved control plane
- Replication & self-healing
- Conditional updates
- Erasure Code (Preview)
- Online server addition
- Lustre/UNS integration

Application Interface:
- HDF5 vol w/o async
- POSIX I/O with conditional update support
- POSIX data mover
- Async HDF5 operations over DAOS
- Spark

DAOS:
- Erasure code
- Telemetry& per-job statistics
- Advanced control plane
- Distributed transactions
- Multi OFI provider support

Application Interface:
- POSIX I/O with distributed transaction support
- HDF5 data mover
- Container parking/serialization

DAOS:
- Progressive layout
- Placement optimizations
- Checksum scrubbing

DAOS:
- Catastrophic recovery tools

NOTE: All information provided in this roadmap is subject to change without notice.

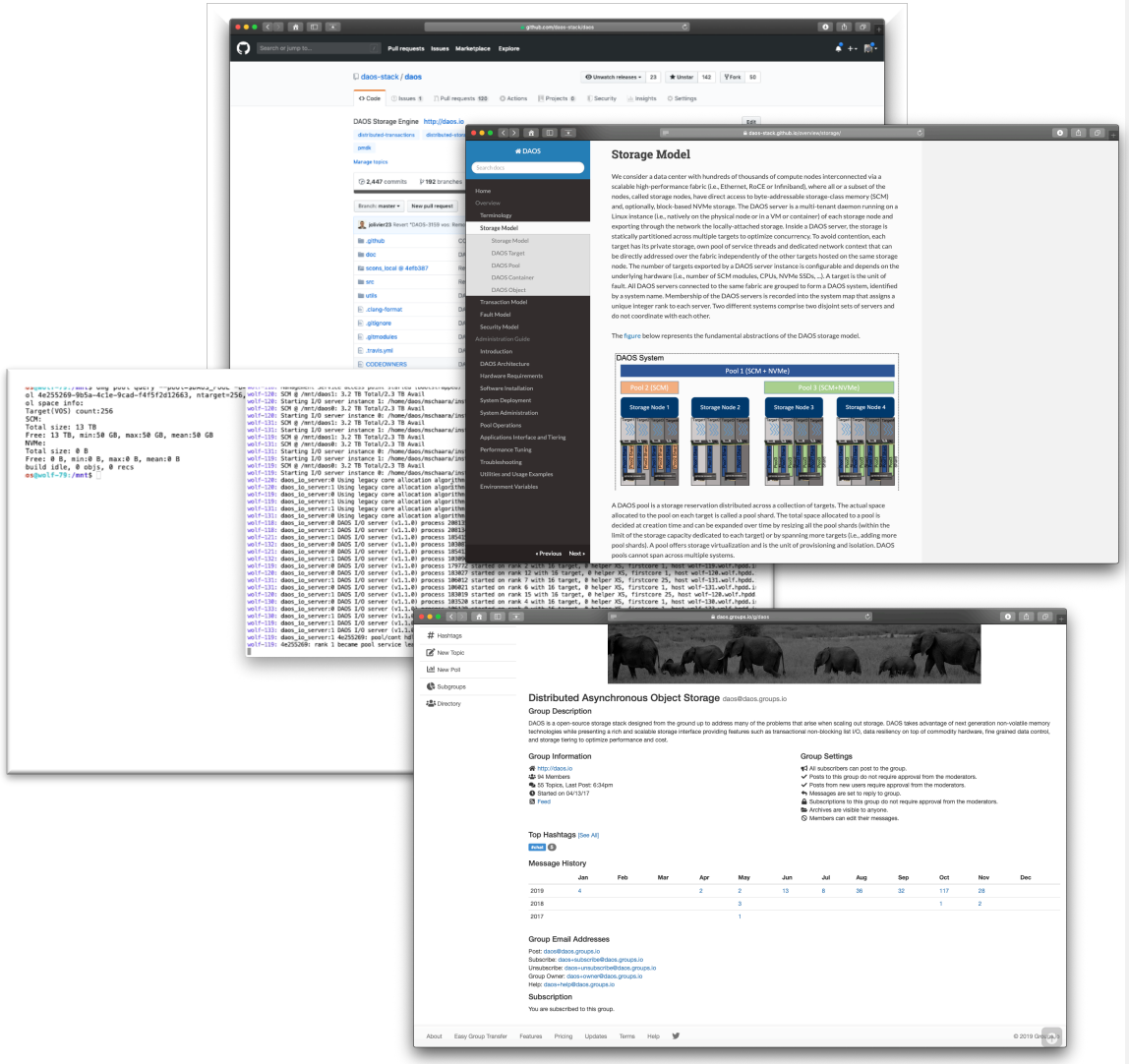
DAOS License Change

- We've received customer feedback requesting a GPLv2-compatible license for DAOS
- DAOS License is changing from Apache 2.0 to BSD + Patent Clause, starting with DAOS 1.2
  - Allows for integration with GPL software, e.g., Lustre, MariaDB/MySQL, fio, …

DAOS Technical Training Program

- Short 20-minute video recordings publicly available.
- Hands on demos and screen sharing sessions focused on:
  - Installation and configuration from RPMs
  - DAOS performance sizing for different configuration.
  - Control plane demo, storage configuration
  - Data redundancy and self healing
  - Middleware overview, what interfaces we have
  - POSIX interface
  - HDFS adapter
  - DAOS native API programming

- Training videos are available on the DAOS YouTube channel at https://bit.ly/3pHHxcL



Resources

Community Website & Documentation

- https://daos.io

Source code on GitHub

- https://github.com/daos-stack/daos

Community mailing list

- daos@daos.groups.io

Community Slack channel

- https://bit.ly/38SOLEy

Support

- https://jira.hpdd.intel.com

DAOS solution brief

- https://www.intel.com/content/www/us/en/high-performance-computing/

DAOS technical paper from SCA'20

- https://rdcu.be/caYtU

DAOS YouTube channel:

- https://bit.ly/3pHHxcL


intel