DUG'21 – 5th edition

DAOS User Group

Kelsey Prantis, DAOS Senior Software Engineering Manager, Intel



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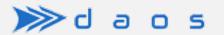


Agenda

Time (CT)	Presentation
8:50am	Welcome & DAOS Update Kelsey Prantis, DAOS team manager, Intel AXG
9:00am	DAOS Async API Support & Performance Tunning in Spark Jiafu Zhang, Big Data Machine Learning Engineer, Intel SATG
9:20am	DAOS Feature Update Liang Zhen, DAOS architect, Intel AXG
9:40am	Status and Roadmap of ROOT's RNTuple and DAOS Javier Lopez Gomez, EP R&D Fellow, CERN
10:00am	High Energy Physics experiment data processing with DAOS in multitier storage environment based on RSC Storage on-Demand Martin Vala, Senior Researcher, JINR Pavel Lavrenko, Chief Business Development Officer, RSC Group Anton Brekhov, Team Lead, RSC Group
10:20am	Break
10:30am	Leveraging DAOS storage system for seismic data storage Omar Marzouk, Associate Software Engineer, Brightskies
10:50pm	Lenovo Update Sigrun Eggerling, DAOS POC Lead, Lenovo Steve Eiland, HPC Storage Product Management, Lenovo

Time (CT)	Presentation
11:10am	Assessment of DAOS as a backend for ECMWF's FDB Nicolau Manubens, Analyst, ECMWF
11:30am	Moving DAOS from a Lab to a Commercial Offering Darren Soothill, VP of Presales, Croit
11:50am	Break
12:00pm	Tools to Migrate and Store DAOS containers on POSIX filesystems Danielle Sikich, DAOS developer, Intel AXG
12:20pm	DAOS Updates from HPE Lance Evans, HPC CTO Chief Storage Architect, HPE
12:40pm	Update on Omni-Path Express Support for DAOS Paul Stasurak, Program Manager for Storage, Cornelis Networks
1:00pm	DAOS on Google Cloud Platform Carlos Boneti, HPC Software Engineer, Google Johann Lombardi, Lead DAOS architect, Intel AXG
1:20pm	Closing remarks Kelsey Prantis, DAOS team manager, Intel AXG

- 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 Roadmap

1H'20 2H'20 1H'21 2H'21 1H'22 2H'22 1H'23 2H'23 1H '24 2H '24

DAOS 1.0 Released June 18, 2020

NVMe & DCPMM support
Per-pool ACL
UNS in DAOS via dfuse
MPI-IO Driver
HDF5 DAOS Connector
Basic POSIX I/O support
CentOS 7 support
Replication & self-healing (Preview)

DAOS 2.0

Erasure Code
Telemetry & per-job statistics
Quiescent server drain
Libfabric stabilization
Improved usability
CentOS 8 support

DAOS 2.4

Checksum scrubbing
Distributed transactions
Container parking/serialization
Multihomed network support
Catastrophic recovery
DSA optimizations

DAOS 3.0

Progressive layout Inline deduplication Inline encryption (QAT) SQL support with predicate pushdown Metadata serialization to SSD

DAOS 1.2 Released April 30, 2021

End-to-end data integrity
Per-container ACL
Replication & self-healing
Quiescent server reintegration
HPD5 DAOS VOL Connector
POSIX I/O improvements
POSIX data mover
Apache Spark support
Leap 15 support
Erasure Code (Preview)

DAOS 2.2

Lustre Integration
Online drain, reintegration & addition
Intel VMD support
Libfabric TCP Provider support
HPE Slingshot support
MLX UCX support

DAOS 2.6

Network topology awareness DAOS Pool resizing Tiering support Inline compression (QAT)

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



DAOS Ecosystem

Orchestrating a brighter world **Atos Hewlett Packard** Supermicr. Enterprise intel **Hardware Partners** inspur Lenovo RSC *** COLFAX Customized Solutions Reseller Partners MEGWARE **ScaleWorX** COMPUTER ENGINEERING Nettrix字畅 **Brightskies** Software Development and 3rd party support Google Cloud SEAGATE 数字化解决方案领导者 **End Customers**



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DAOS L3 Technical Support

- Intel DAOS team to provide commercial L3 support to partners
- 3Y is the minimum support contract, with ability to extend
- Fulfillment:
 - MMID SKU standard delivery process
 - Sized based on the total hardware
- Escalation Path
 - PoC program early engagement/PoCs will have access to our open-source community support Mailing list + Slack channel, without guaranteed SLAs
 - Community JIRA tickets for tracking L2 to L3 escalation



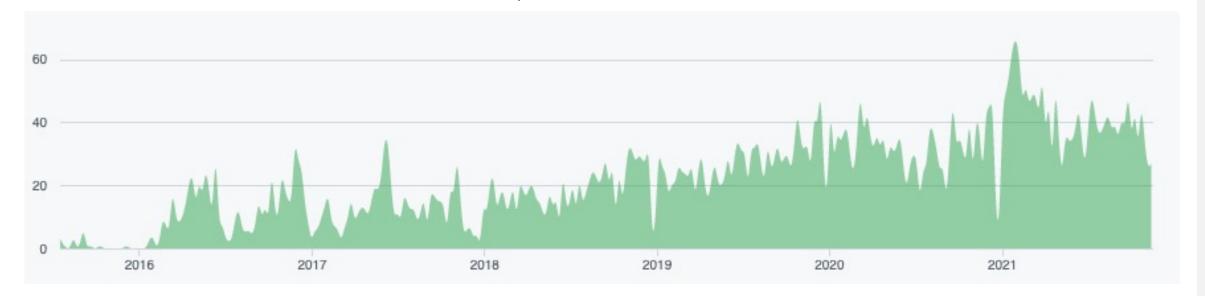
Join Us!

- Hiring a Customer Support & Enablement Engineering Manager
- Responsibilities Include:
 - Coordinating a team in the diagnosis, design, and implementation of solutions to complex technical challenges
 - Understanding features from existing documentation and discussions with technical leaders
 - Fostering good development practices that result in maintainable, scalable, and on-time code
 - Maintaining documentation of team schedules, progress, and performance
 - Providing day-to-day guidance on prioritization of work amongst multiple deliverables
 - Managing customer and partner relationships, and coordinate engineering activities between Intel, partners, and end customer deployments
- Flexible Location
- https://bit.ly/3DA5iK4



A few fun stats

- Since DAOS 1.2.0...
 - 1,427 commits
 - +375,092, -138,474 lines of code
 - Contributions from 51 developers in 9 different countries





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

Intel DAOS Website

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

DAOS solution brief

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

DAOS technical paper from SCA'20

https://rdcu.be/caYtU

DAOS YouTube channel:

https://bit.ly/3pHHxcL



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