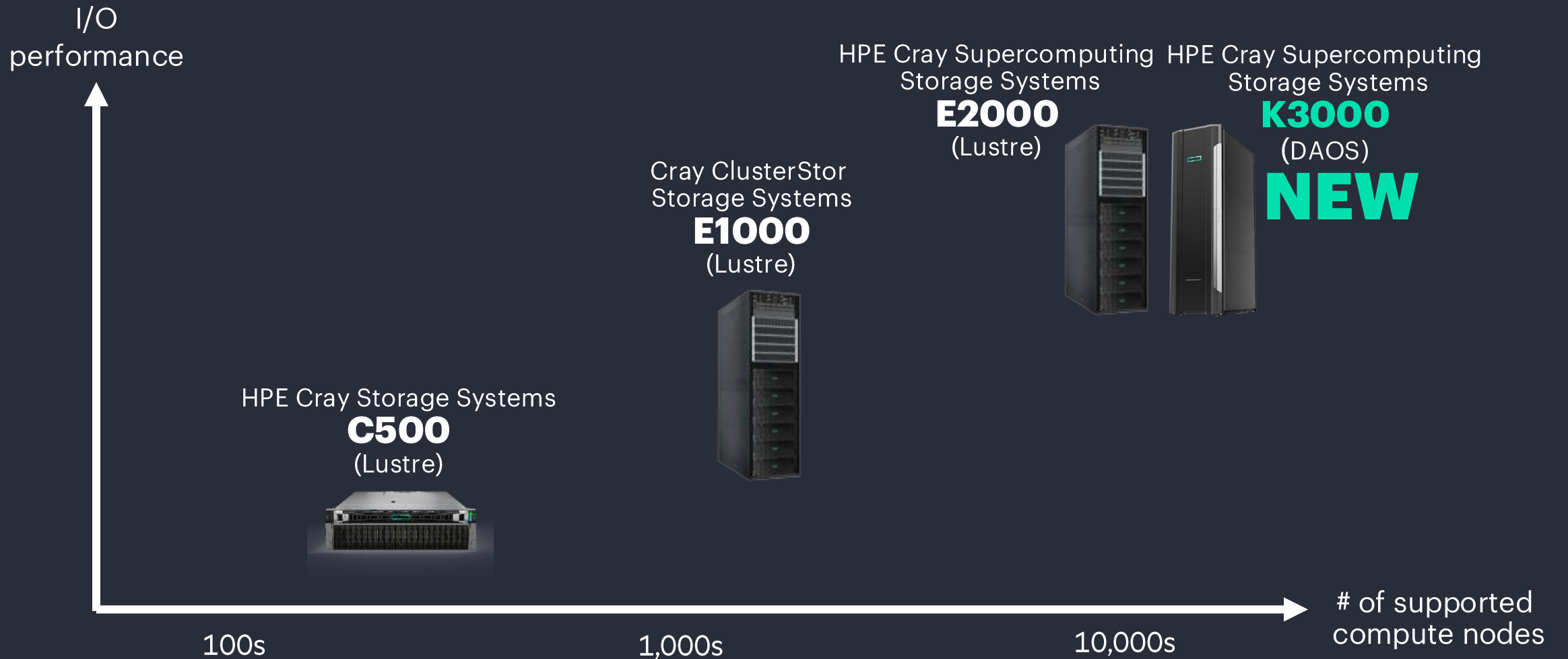


HPE Cray Supercomputing Storage Systems K3000

Andrey Kudryavtsev, Senior Principal Product Manager

HPE's supercomputing storage portfolio

Supercomputing storage for any performance requirements and compute cluster sizes



*Scalable Storage Unit

HPE Cray Supercomputing Storage Systems K3000 (“K3000”)

Complete Storage Appliance

- Includes Fabric and Management HW infrastructure
- Extremely scalable from 4 to 4k storage nodes configuration
- Based on HPE ProLiant Portfolio with high density options
- Scale testing and optimizations
- Ready to be used, only needs a basic info (IP, user, etc)

Full cycle of service and support

- Improved usability and simplified deployment
- Service contracts, HPE installation and support services

Various delivery options

- Standalone with self contained infrastructure and management
- Hybrid with E2000/K3000 layout
- Racked or rackless delivery



1
DAOS management node



**Add as many DAOS server nodes
as necessary to meet your
requirements**



Where HPE K3000 fits the best?

Next gen system for HPC/AI

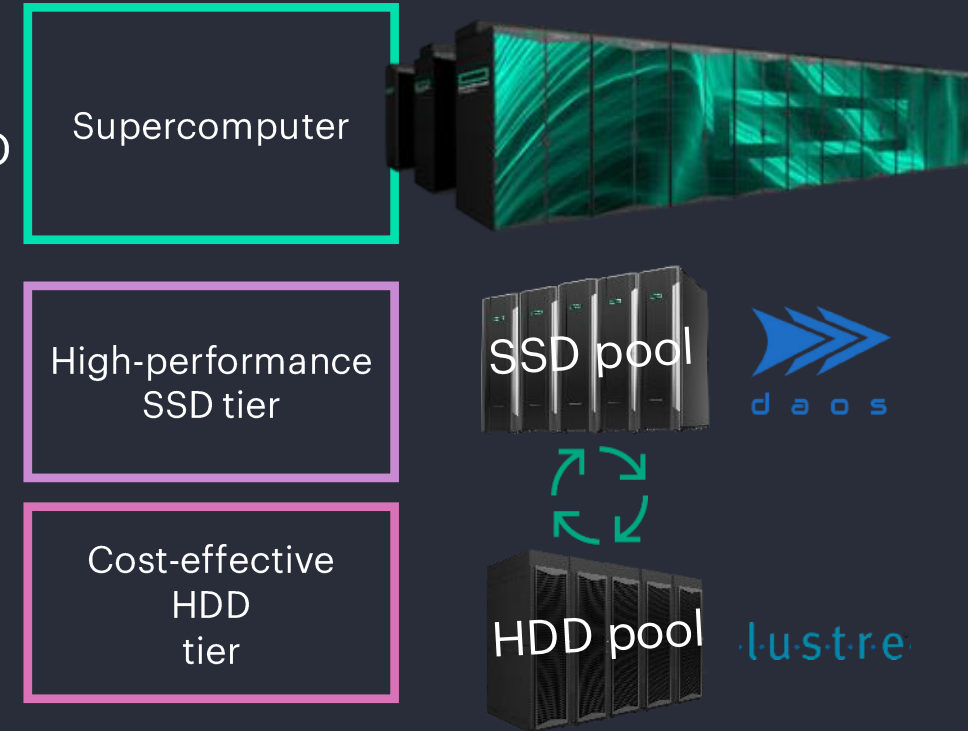
- Extremely high-throughput, scalable metadata and small-object workloads, exascale-focused I/O, custom HPC and AI data paths
- New and Traditional HPC use cases, Commercial HPC and Sovereign AI

Augments and leverages E2000

- Hybrid configurations with K3000 as the Scratch tier
- ClusterStor provides the baseline, high-capacity tier including HDD
- Data migration, staging on demand

Agile development ready for new markets

- Adopt new media and deployment models
 - Over 5 decades of expertise designing highly optimized solutions
 - Dedicated teams for benchmarking, apps and code optimization
- Easy to expand and grow
 - PoC program for small systems with the commercial support service
 - Post Sales System Expansion



Storage Node Configuration options

Base building block:

1U HPE ProLiant Compute DL360 Gen12

- With 8/12/16 or 20x E3.S NVMe SSDs in 1U
- 3.84/7.68 /15.36TB per NVMe (30.72TB on roadmap)
- 2x 48 Core CPUs (96 total cores per node)
- 512GB/1024GB/2048GB DRAM per node based on drive size
- Up to 85 GB/sec Read/Write throughput per 1 U node
- Up to 2 million random 4 KiB IOPS per 1U node

Fabric Support

- HPE Slingshot interconnect 400
- InfiniBand NDR
- 400 Gbps Ethernet (TCP and RoCE v2)

Management Network

- 1 Gbps iLO Ethernet management network
- 10 Gbps Ethernet management node connection



HPE K3000 v1.0

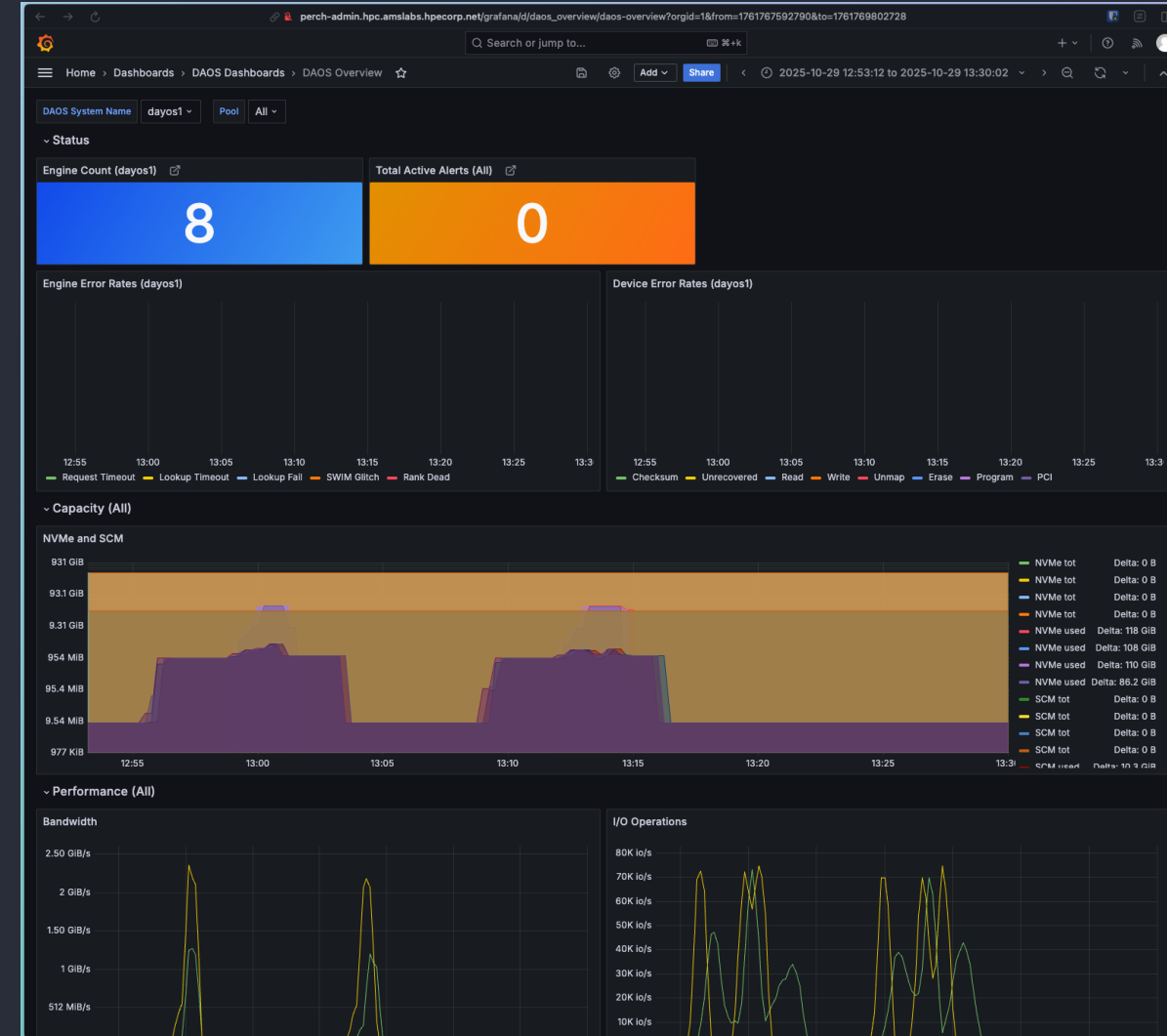
- K3000 1.0 release (DAOS 2.8 release and HPE cluster management)
- Focused on reliability and full platform integration with HPE ProLiant DL360 Gen12
- Automatic HW discovery, provisioning, and configuration
- Simplified deployment and control interface with CSC (Cray Storage Command)
- Admin node for cluster monitoring and SW/HW telemetry aggregation
- API RESTful interface for integration with other services, including UI
- New Dashboard for visualization



Key Focus for K3000 v2.0

In-cycle with DAOS 3.0 development and additional HPE ingredients

- **S3 scalable gateways**
 - Standalone, hybrid or client container
- **Multitenancy requirements**
 - Pool-based multitenancy solution
- **Hardware / SKU optimizations**
 - MD-on-SSD phase 2 implementation
 - Perf/\$ HW layout optimizations
 - Higher storage density per node (with 30TB SSDs)
- **Administration**
 - UI development



Thank you

