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DataDirectTM
N E T W O R K S
I N F O R M A T I O N I N M O T I O NTM

TER@TEC 2012

ECOLE POLYTECHNIQUE

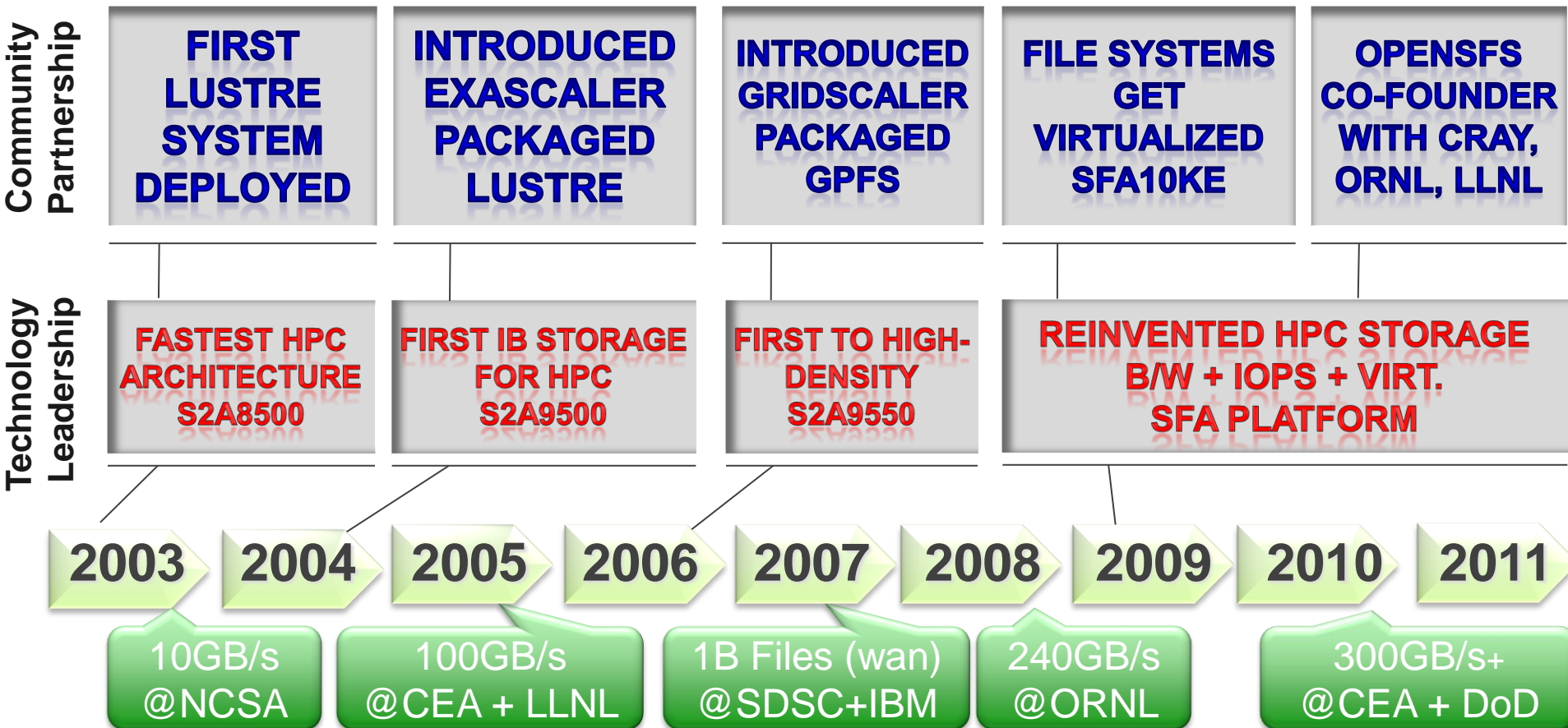
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EMEA Strategic Director, Technical Sales

ddn.com

The DDN-HPC Timeline

A Decade Of Commitment To The HPC



INFRASTRUCTURE



Organizational
L1/2/3, ProServe

Systems
Oracle

PEOPLE



Organizational

- 140: Data Intensive Computing Team
- World's Largest HPC I/O Front-Line

R&D



Storage Fusion

- 1M+ of State-Machine Code
- 100s of Engineers
- Over 6 projects

**The World's Largest Independent Storage Company.
Heavily Invested In Parallel and Object Storage Systems.
Guided By Our HPC Customers. (61/100 of Top500!)**

The Complete Big Data Platform

Ingest

Process

Store

Distribute



Only DDN enables every part of the information value-chain:

- DDN technology used for high scale processing
- Customers now deploying global collaboration (cloud) infrastructure

The DDN HPC Advantage – Great [Stuff] that our Engineers make

Real-Time, HPC State Machine

- 1M Lines of Zero-Interrupt Storage Engine Code
- Highly-Parallel Storage Processing Architecture
- Adaptive RAM Cache for Mixed Workloads, Journals
- Embedded Virtualization For Lustre & GPFS Appliances



SFA12K

Quality Of Service

- Critical For Striped Write & Read File I/O
 - SFA Technology Maximizes Cluster Productivity
 - Performance Degradation Less Than 10%
- Real-Time Latency Management

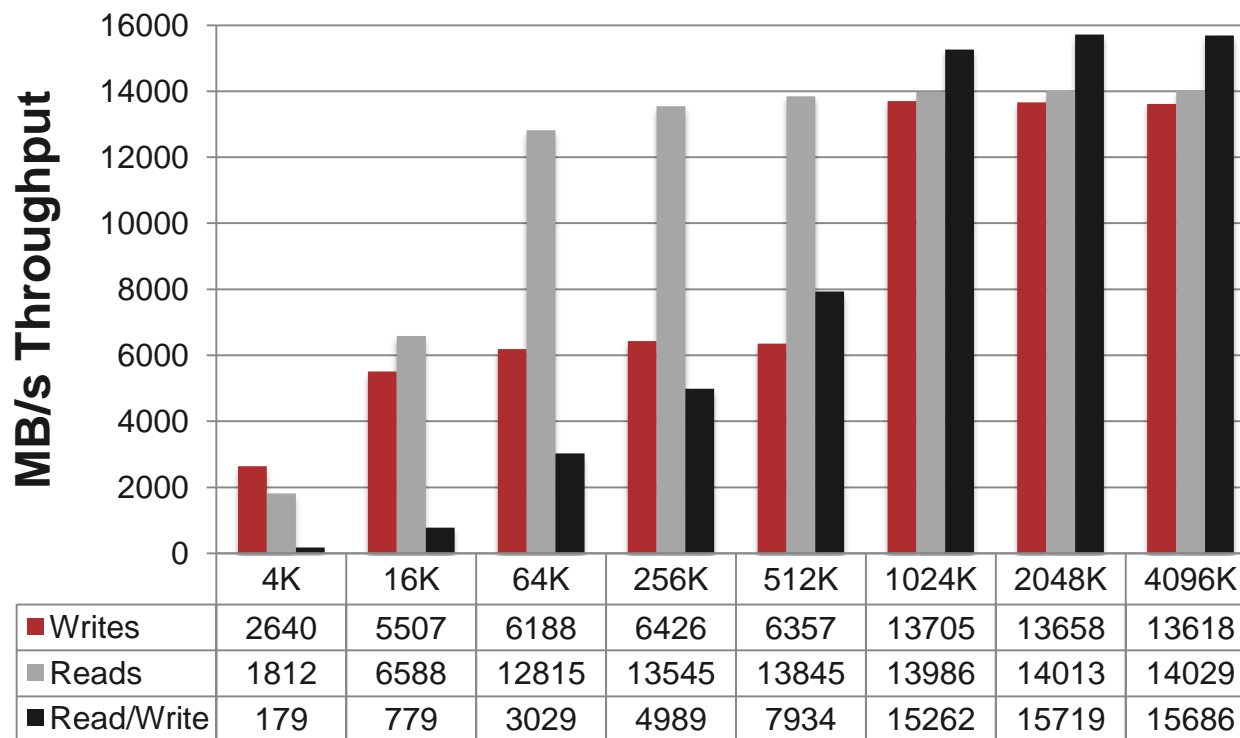
Autonomous, Self-Healing Technology

- Automatic Drive Power Cycling
- Predicts and Prevents Drive Failures
- Minimizes Failure Instances by 80%



SFA10K-X Performance: Block

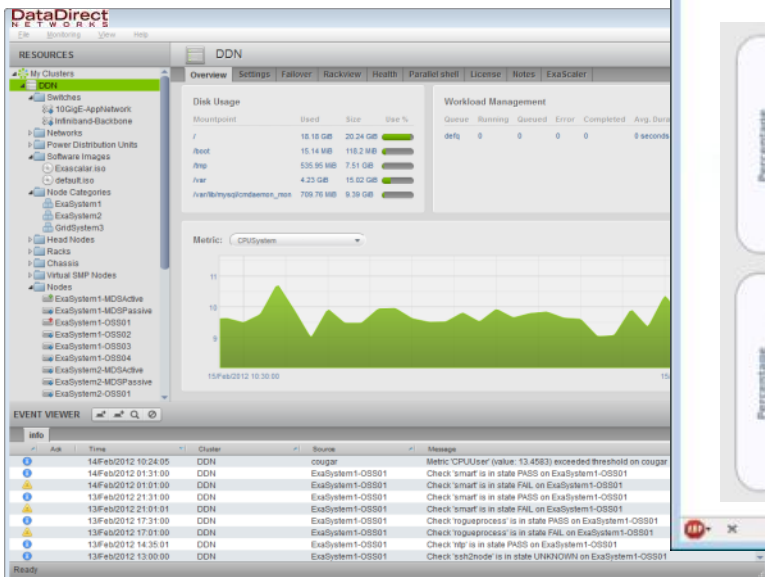
560 x 3TB Drives, 56 x 8+2, Read and Write Throughput, Varying Block Size, 8 x QDR IB



Building Block for Big Data, HPC, Analytics Systems: Scale & Consolidate Linear Scalability Without Data Protection Penalty

A centralized configuration and monitoring solution for the datacenter with a top-down support for both

SFA Storage
Arrays, file
systems, and VMs



Top500 – Storage, June 2012

DDN proudly powers...

| | | |
|------|-----|---------------------|
| 70% | 7 | Of the TOP10 |
| 65% | 13 | Of the TOP20 |
| 64% | 32 | Of the TOP50 |
| 61% | 61 | Of the TOP100 |
| 29% | 143 | Of the TOP500 |
| over | 50% | Of the TOP500 GB/s |
| over | 75% | Of the Lustre Sites |
| over | 60% | Of the GPFS Sites |

Thanks to you !



**Integrated, Comprehensive
Appliance Management Tools**



**Exascale Engineering
Objects, Data Models,
Storage-Class Memory**



Thank You.