



Making Innovation Real

Dell EMC Update

Hyperion HPC User Forum

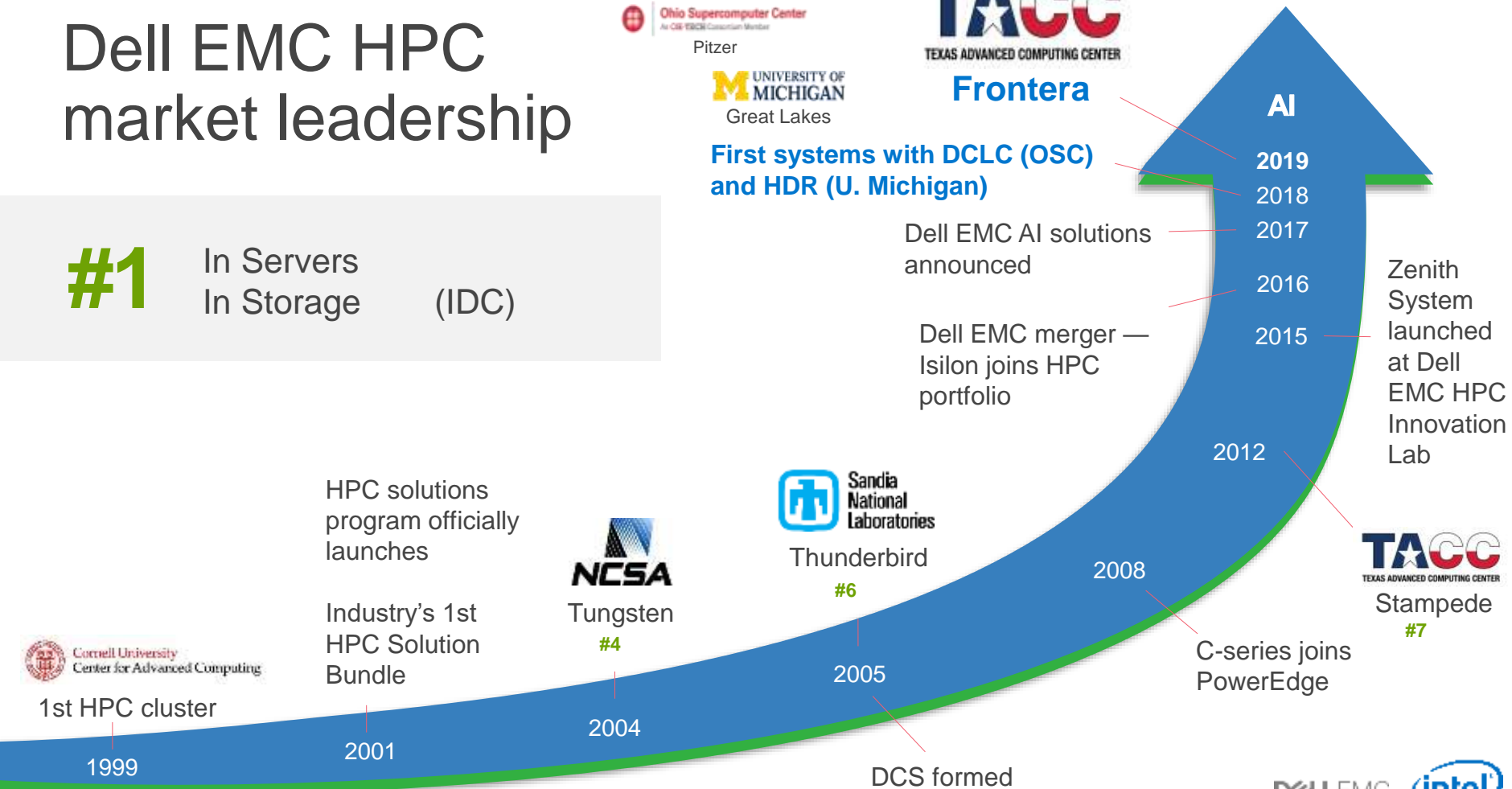
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DELLEMC

Dell EMC HPC market leadership

#1 In Servers
In Storage (IDC)



Making Innovation Real with HPC

Dell EMC's unique approach achieves **faster results**, enables **discovery** and drives design with **optimized HPC, Data Analytics and AI solutions** for better **value** through:



Advancing HPC – Trusted Advisors, from the workgroup to the TOP500



Democratizing HPC – Accelerating science, engineering, analytics and AI



Optimizing HPC – Optimized products, solutions and services for HPC

Making Innovation Real with HPC

Dell EMC's unique approach achieves **faster results**, enables **discovery** and drives design with **optimized HPC, Data Analytics and AI solutions** for better **value** through:



Advancing HPC

- Continued expansion of the HPC & AI Innovation Lab
- New HPC Center for Excellence: CSIRO



Democratizing HPC

- New/Updated Ready Solutions for HPC and AI
- New Ready Solution for Lustre & NFS based on PowerVault ME4
- Solutions in collaboration with U. Cambridge "Data Accelerator"



Optimizing HPC

- First systems delivered with DCLC and with HDR IB
- New upcoming systems

New systems...



Great Lakes



UNIVERSITY OF
CAMBRIDGE

Cumulus - UK Science Cloud



Ohio Supercomputer Center

An **OH·TECH** Consortium Member

Pitzer



SUPERCOMPUTING WALES
UWCHGYFRIFIADURA CYMRU

Hawk & Sunbird



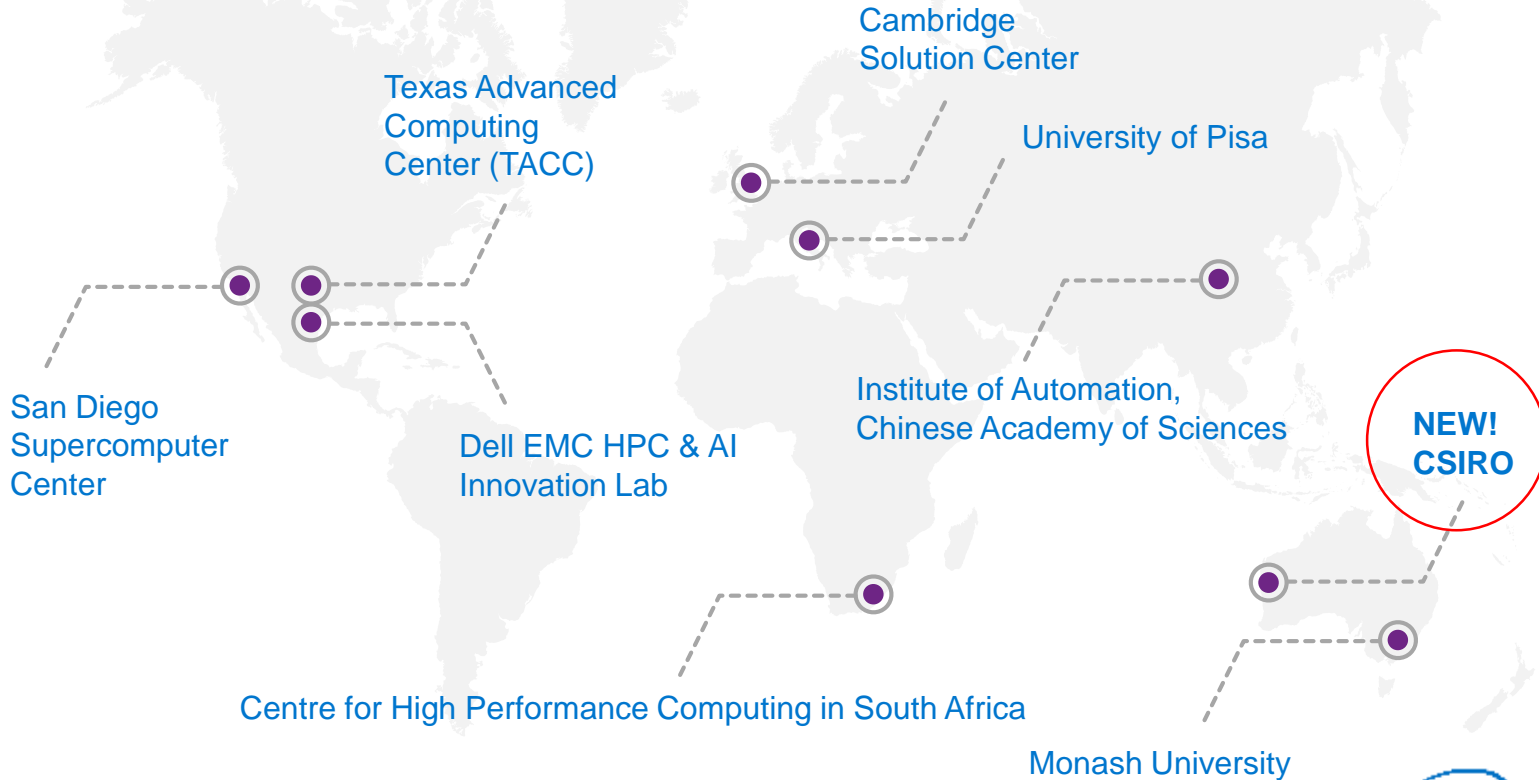
TEXAS ADVANCED COMPUTING CENTER

Frontera



The Spirit of Collaboration

World-class Dell EMC HPC Centers of Excellence



Vision for HPC Storage



Dell EMC Data Accelerator

NVMe dense PowerEdge servers, with parallel file system for check pointing and burst buffer workloads

(Later this year)



Ready Solution for HPC Lustre Storage

Scale out performance and capacity with additional OSS pairs



Ready Solution for HPC NFS Storage

High availability storage system with up to 1008 TB of raw storage capacity using Red Hat HA software stack



Isilon

Scale-out NAS storage to store, protect and analyze unstructured data



Elastic Cloud Storage (ECS)

All the benefits of a public cloud while keeping cost under control

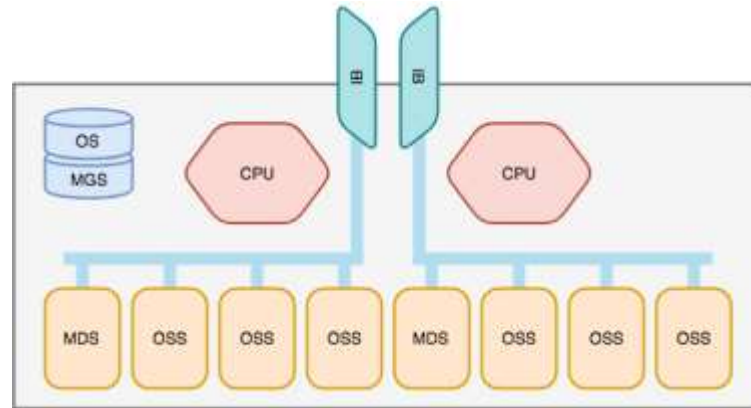
Fast Scratch

Project

Archive

The Data Accelerator Platform

Sponsored by Dell EMC and Intel




- Each DAC uses an internal SSD for the MGS, should it be elected to run a file system.
- NVMeS then have an MDS or OSS applied. This arrangement can be changed as required.
- Integration with SLURM via flexible storage orchestrator



- 24 Dell EMC PowerEdge R740xd
- Each with 12 Intel SSD P4600
- 2 Intel Omni-Path Adaptors
- 2 Intel Xeon Scalable Processors
- 1/2PB of Total Available Space

IO-500

IO500

This is an intermediate list based on corrected calculations¹⁾ for the IO-500 **ranked list**²⁾ from November 2018 (from  SC 2018).

Please see also [the 10 node challenge ranked list](#).

The list shows the best result for a given combination of system/institution/filesystem.

#	information							io500		
	institution	system	storage vendor	filesystem type	client nodes	client total procs	data	score	bw	md
									GiB/s	kIOP/s
1	Oak Ridge National Laboratory	Summit	IBM	Spectrum Scale	504	1008	zip	330.56	88.20	1238.93
2	University of Cambridge	Data Accelerator	Dell EMC	Lustre	528	4224	zip	158.71	71.40	352.75
3	Korea Institute of Science and Technology Information (KISTI)	NURION	DDN	IME	2048	4096	zip	156.91	554.23	44.43

The Spirit of Community: The Dell EMC HPC Community

11th Meeting: March 25-28, 2019 in Austin

Save the dates!

12th Meeting: June 16, 2019 at ISC19

13th Meeting: November 18, 2019 at SC19



Follow the Community at www.dellhpc.org





www.dell EMC.com/hpc

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