



# Transforming the Future

## HPC @ Dell EMC

**Ed Turkel**

**[ed\\_turkel@dell.com](mailto:ed_turkel@dell.com)**

**HPC Strategist**

**DELLEMC**

# Dell EMC HPC is Transforming the Future

## Advancing HPC

Expertise, technology and partnerships advancing the state-of-the-art for HPC solutions from the workgroup to the TOP500

## Democratizing HPC

Enabling small and medium sized enterprises to accelerate their science, engineering and analytics

## Optimizing HPC

Robust portfolio of products and services optimized for HPC from a company who will be there for you over the long haul



Domain Experience  
& Expertise



Strategic  
Partnerships



Technology  
Innovations



HPC Innovation  
Lab



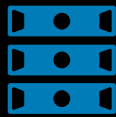
Dedicated HPC  
Sales & Soln. Architects

# Dell EMC HPC Systems

Dell EMC HPC Systems for Research, Manufacturing, Life Sciences, Lustre and NFS



Dell  
Workstations



Dell EMC  
Servers



Dell EMC  
Storage



Dell EMC  
Networking



Management



Services



VMware

# Expanding Leadership

## Advancing HPC



Stampede 2.0  
12.8 / 18PF



UNIVERSITY OF  
CAMBRIDGE

Wilkes-2 1.8PF  
Peta4-KNL 0.9PF



Zenith  
538TF, #373



“Booster”  
5PF

## Democratizing HPC



UNIVERSITY OF PISA



Fraud Detection



Bracewell

## Optimizing HPC



PowerEdge C4130



PowerEdge C6320p



Isilon All Flash



PowerEdge C6420  
(14G)

# Tech Leaders Are Proclaiming Disruption, Revolution...

*“When you get all this data coming in from hundreds of billions of connected devices and apply to that artificial intelligence, it’s almost like a fourth industrial revolution and an incredible opportunity for companies to re-imagine themselves in this digital age.... The last 30 years have been incredible in IT, but the next 30 years will make it look like child’s play.”*

**– Michael Dell**

**Sapphire SAP Conference May 16<sup>th</sup> 2017**

# Dell EMC is at the forefront of AI

Dell EMC uniquely provides a portfolio of technologies—**spanning workstations, servers, networking, storage, software and services**—to create the accelerated HPC solutions that underpin successful machine learning or deep learning implementations.

Dell EMC has the **expertise, accelerated performance and building block solution approach** that will help you adapt as machine learning and deep learning evolve over time.



Acceleration



Expertise



Evolution



Dell  
Workstations



Dell EMC  
Servers



Dell EMC  
Storage



Dell EMC  
Networking



Management



Services



VMware





18 Jul 2017

# CSIRO powers bionic vision research with new Dell EMC PowerEdge based artificial intelligence capability

The system will help Data61's Computer Vision group use large data sets for its bionic vision solution, helping it process more images and provide contextual meaning for recipients

Bracewell: 114 x PowerEdge C4130 with NVIDIA Tesla P100 GPUs, w/ NVLINK, dual Intel Xeon CPUs and Mellanox 100Gbps EDR InfiniBand, plus Bright Cluster Manager Software

<https://www.csiro.au/en/News/News-releases/2017/CSIRO-powers-bionic-vision-research-with-new-Dell-EMC>

<http://custom.crn.com/dell-learningcenter/>

## Machine Learning Knowledge Center

Featuring the latest developments in artificial intelligence, machine learning and deep learning

DELL EMC





# Let's Connect

Join our Dell EMC HPC Community at [dellhpc.org](http://dellhpc.org)



UNIVERSITY OF PISA

September 26-27, 2017  
Accelerating Understanding Conference  
University of Pisa, Italy



November 13, 2017 – 8am to 2pm  
SC17  
Grand Hyatt Hotel, Denver, CO

**D**  **LEMC**

# Expanding partnerships for innovation and impact

## HPC Centers for Innovation



### North America

- Texas Advanced Computing Center
- San Diego Supercomputer Center
- University of Illinois (NCSA)

### Europe, Middle East & Africa

- University of Cambridge
- University of Pisa
- Center for High Performance Computing, South Africa

### Asia Pacific & Japan

- Institute of Automation, Chinese Academy of Sciences (CASIA)
- Monash University