The infrastructure foundation for the

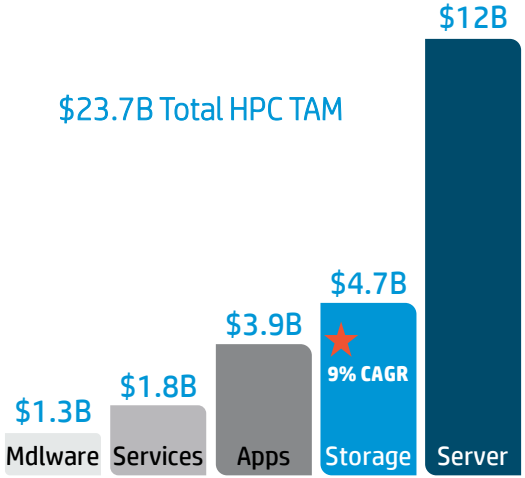
New Style of IT

A strategic approach to infrastructure transformation

How fast your enterprise moves, depends on how far your infrastructure can take you

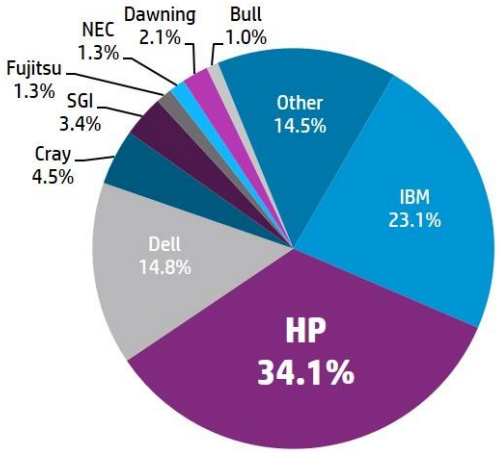
HPC & Big Data are GROWING

HP Apollo 8000 System awarded Most Innovative and Significant Product of the Year!!



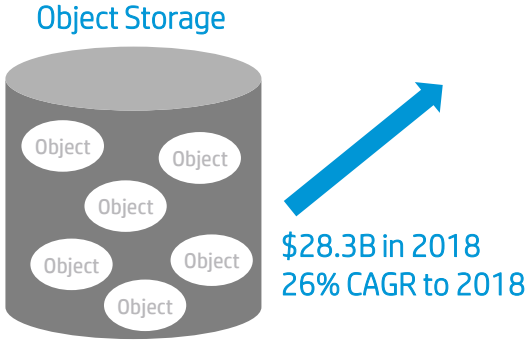
SOURCE: WW Broader HPC 2014–2018 Forecast Servers, Storage, SW, Middleware and Services, IDC, Jun'14.

- **HPC and Big Data have converged**
- Driven by data centric HPC workloads in life sciences, oil & gas and manufacturing
- Driven by demands for data analytics in cloud and enterprise IT



SOURCE: Q4'14 HPC QView, IDC, Mar'15.

- **HP is #1 in the rapidly growing HPC market**
- **HP gained** +1.6% share year/year as IBM declined significantly
- HPC is growing at 7.4% CAGR (2013-2018) per IDC



SOURCE: IDC Marketscape: Worldwide Object-Based Storage 2014 Vendor Assessment. December 2014.

- **Object storage** balances scale, complexity, and costs for petabyte-scale data storage in cloud and enterprise IT.

HP has created an HPC & Big Data Global Business Unit

Mission: deliver complete HPC & Big Data solutions

Servers
HP Apollo Systems
HP BladeSystem
HP ProLiant Gen9 and
HP Integrity Superdome X
Servers

Storage
HP SL4500 System
with Object-Storage
and HPC Storage
Solutions
3rd party Lustre Solutions

Accelerators
AMD FirePro GPUs
Intel Xeon Phi Coprocessors
NVIDIA Grid and Tesla GPUs
HP Accelerator-enabled Servers

Remote Desktops
NVIDIA Grid GPUs,
HP GPU-enabled Servers,
HP Workstation Blade Servers,
HP Remote Graphics and
3rd party S/W

Network
Intel and Mellanox
InfiniBand,
Low-Latency Ethernet

Power & Cooling
HP Modular Cooling System
HP Performance Optimized DataCenter
HP Apollo 8000 System

Management
HP Insight CMU
Insight CMU Connector Partners
HP OpenView

Cloud
HP Helion Self-Service
HPC Solution
OpenStack

Services
HP Services for HPC

HP Apollo Systems

Extending the Apollo portfolio with family of Scale-Out solutions for general purpose, Big Data and HPC solutions




Hyperscale Compute

Apollo 2000

Big Data Storage Server

Apollo 4000 Family

Rack Scale Divisional HPC

Apollo 6000

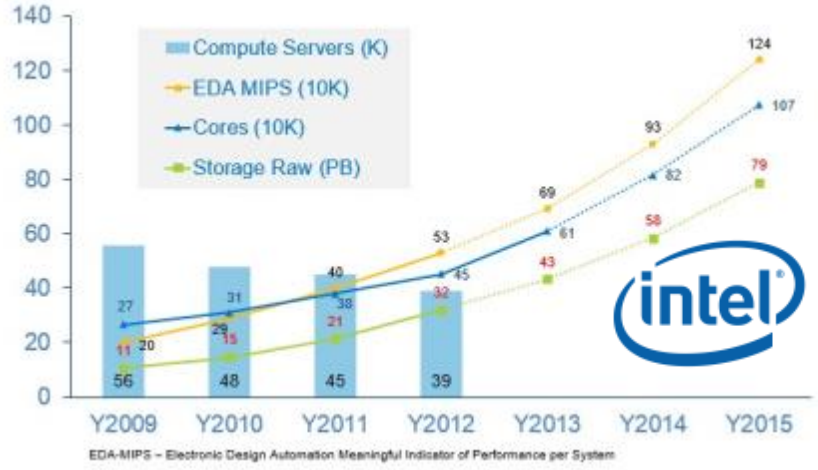
Water-Cooled Supercomputing

Apollo 8000

Intel Electronic Design Automation (EDA)

The quest for more performance per core in ~the same power and space envelope

- 39k servers and shrinking with consolidation
- **1M cores by 2015**, delivering 1.24M EDA MIPS
- Moving from competitive 2P blades to 1P servers in 59 data centers worldwide
- **Hundreds of thousands of logic simulations/day**
- Mostly single-threaded applications, massive distributed computing job, not network sensitive



As the server nodes have decreased in number, the amount of processing capacity on the EDA workloads and cores has scaled at a slight exponential curve

"The most impressive thing is that in recent years, this **massive increase in compute** in the EDA clusters has been accomplished **while keeping the server budget flat and trying to push it down**."