Cray Corporate Update

Larry Hoelzeman
VP WW Sales

September 2012
Our Focus: Supercomputing

We build the world’s fastest supercomputers to help solve “Grand Challenges” in science and engineering.

Earth Sciences
CLIMATE CHANGE & WEATHER PREDICTION

Life Sciences
PERSONALIZED MEDICINE & IMPROVED BIOFUELS

Computer-Aided Engineering
AIRCRAFT DESIGN, CRASH SIMULATION & FLUID DYNAMICS

Petroleum
SEISMIC IMAGING & RESERVOIR SIMULATION

Defense & National Security
WARFIGHTER SUPPORT, THREAT PREDICTION & STOCKPILE STEWARDSHIP

Scientific Research
NEW ENERGY SOURCES & EFFICIENT COMBUSTION
Our New CTO...

Bill Blake
Leveraging Cray’s Expertise at Scale

Over 35 PF’s & $600+M In HPC Systems

>2 Petabytes
70 GB/sec

2.5 Petabytes
140 GB/sec

>10 Petabytes
240 GB/sec

>2.5 Petabytes
>80 GB/sec

>25 Petabytes
1000 GB/sec

1.2 Petabytes
17 GB/sec

>2.5 Petabytes
>80 GB/sec

>2.5 Petabytes
>80 GB/sec

>2.5 Petabytes
>80 GB/sec

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Blue Waters & Titan

$188M
11.5PF XE6/XK6
25 PB Sonexion
1 TB/s I/O BW
1.5 PB Memory

$97M
10-20PF XK6
0.6 PB Memory

HPC User Forum, September 2012
Enabling Simulation and Analytics

Scalable Computation

“Big Data” Storage

“Big Data” Analytics

Adaptive Supercomputing

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Cray Industry Solutions

Industry-specific solutions that leverage Cray expertise across all technologies and products
Technical Enterprise Systems

- Merged CX and XE/XK-m lines
- Leverages proven HPC technology
- Entry-level systems starting at $200K
Technical Enterprise Customers

University / Higher Education

Weather & Earth Sciences

Commercial

Classified Systems
Cray Storage and Data Management

- Highly integrated
- Extreme Scalability
- Tested with CLE
- Fully Supported
- Fast Installations
- Cluster-attached

- Flexibility
- Cray Integrated
- Tested with CLE
- Fully Supported

- Strong Community
- Improved SW testing
- Cray Scale Testing
- Cray Support
- Whamcloud, Xyratex

- Integrated
- Tested with CLE
- Fully Supported
- Data movement
- Flexible Logins
- Bright, Dell, Mellanox

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Sonexion Appliance-based Approach

Three Simple Modular Components

Rack
- Preconfigured power, cabling & switches

Metadata Management Unit
- Can support up to 6 billion files

Scalable Storage Unit
- 3 GB/sec sustained
- Performance scales with capacity
- Lustre can scale up to 64 petabytes
Created a new division within Cray

100% focused on Big Data solutions

Rapidly-growing, multi-billion market

Hired new SVP and GM—Arvind Parthasarathi
Big Data Graph Appliance for Relationship Analytics

Discover Unknown and Hidden Relationships in Big Data

- Relationship Warehouse supporting Inferencing/Deduction, Pattern-based queries and Intuitive Visualization

Perform Real-time Analytics on Big Data Graph Problems

- High-performance, Graph Appliance with large shared-memory, massive multi-threading and scalable I/O

Realize Rapid Time to Value on Big Data Solutions

- Ease of Enterprise adoption with industry-standards, open-source software stack enabling reuse of existing skillsets and no lock-in
Cray signed a definitive agreement for the sale of our interconnect hardware development program and IP to Intel.
Cray is working closely with the 3 mainstream processor vendors

- Overall technical directions are similar (heterogeneous computing)
- Cray is building our systems and software to be compatible with all three
- Consulting with them on needs for HPC applications and systems
Supercomputing Leadership

Technology
Custom designed for unmatched scalability, productivity and system balance

Product Roadmap
Adaptive Supercomputing vision from sustained petaflops through exascale

Focus
100% dedication to HPC with purpose-built supercomputers
In short...

Same Parts

Same People

Same Plan
We are hiring!

www.cray.com to apply

Thanks!