

# Intel and HPC: The Architecture for Discovery

**Debra Goldfarb**  
Technical Computing  
Group  
Intel Corporation



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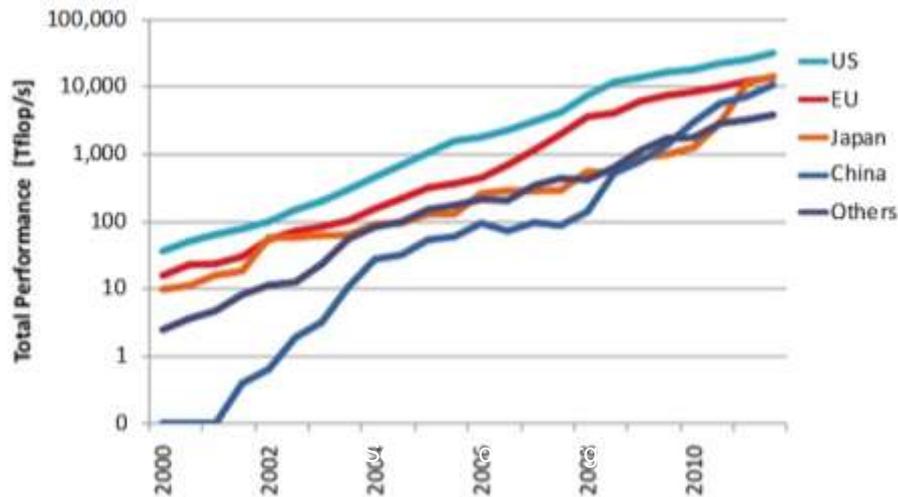
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# Race for HPC Competency

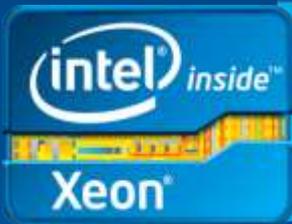
- Industrial challenges
  - Renewable energy
  - Genomics/ Biosciences
  - Design and Simulation
  - Media and Entertainment
- National security challenges
  - Threat monitoring and cyber security
  - Nuclear safety

Performance of Countries



*To Compete, You Must Compute*

# What's Intel Doing in 2012 in HPC



Intel® Xeon® Processor:  
E5-2600/4600 Product Families  
The Foundation of HPC



Fabric Technology:  
Cray's Aries Interconnect  
Intel® True Scale Interconnect Product Family

Major Investments in  
Key Technology



Intel® Xeon Phi™ CoProcessors

Barriers in HPC:



Whamcloud Lustre System Expertise

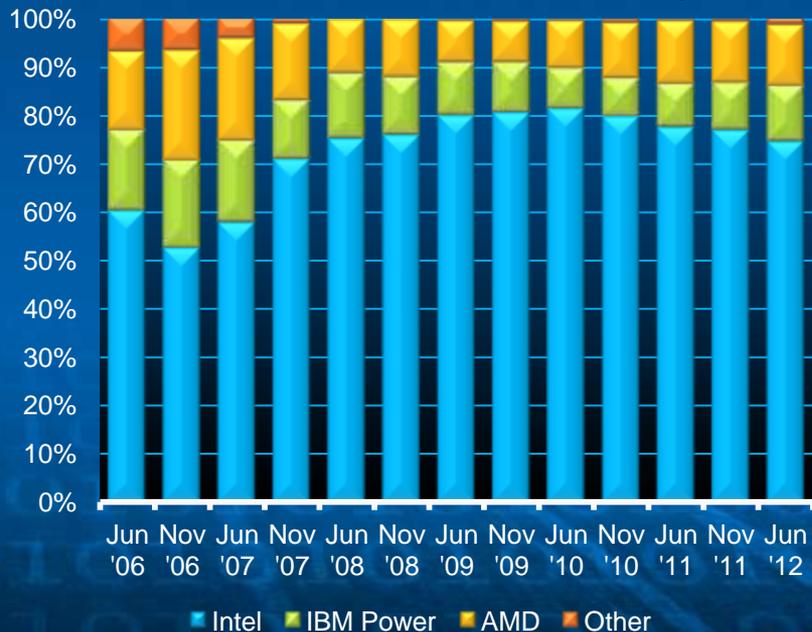


# Intel® Xeon® Processor E5 Family: Foundation of HPC

- Intel® Xeon® processor remains #1 architecture
  - 78% of new Top500 systems
- Rapid Adoption of Intel® Xeon® Processor E5 Family
  - 45 systems just 3 months post-launch

Genci LRZ LLNL LANL University of Frankfurt

## Architecture Presence in Top 500



# Next Front of System Innovation: Fabrics

*HPC Expertise  
Intellectual Property  
World-class Interconnects*



*HPC Expertise  
Fabric Management & Software  
Highest Performance, Scalable IB Products*



*Low-latency Ethernet Switching  
Data Center Ethernet Expertise  
High Radix & Low Radix Switch Products*



*Market Leading Compute & Ethernet Products  
Platform Expertise*



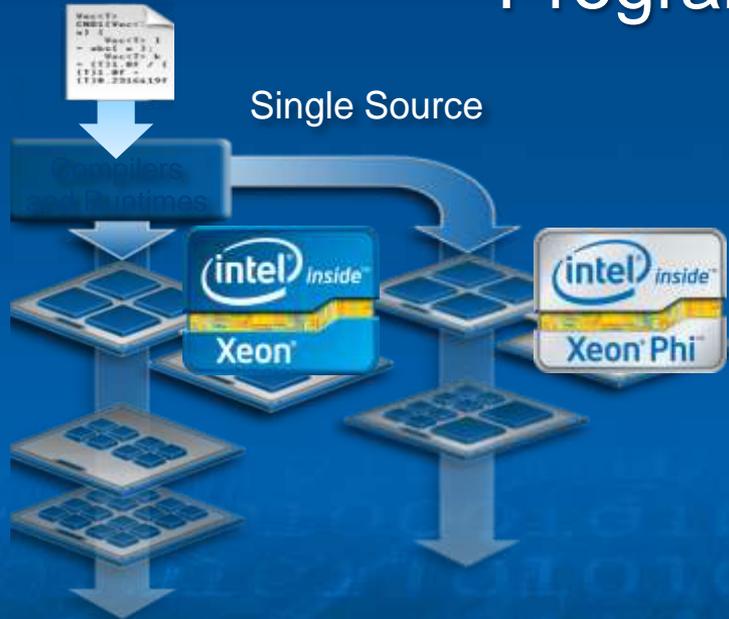
**Intel's  
Comprehensive  
Connectivity and  
Fabric  
Portfolio**

*Unprecedented Rate of Innovation in HPC Fabric*

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# Game Changer for HPC Performance & Programmability

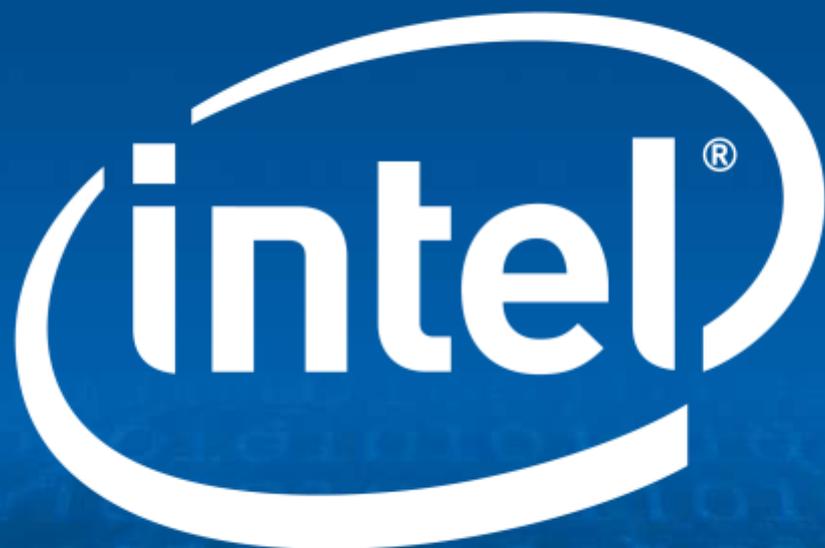


*“Unparalleled productivity... most of this software does not run on a GPU”*

*Dr. Robert Harrison, NICS, ORNL*

# What to Look for:

- Intercept of Big Data Technology and HPC
- Breaking Barriers to Adoption of HPC in Broader Market
- Ecosystem addressing Scalability Barriers on the Path to Exascale
- Dealing with Resiliency as an Inhibitor



# Risk Factors

The above statements and any others in this document that refer to plans and expectations for the second quarter, the year and the future are forward-looking statements that involve a number of risks and uncertainties. Words such as “anticipates,” “expects,” “intends,” “plans,” “believes,” “seeks,” “estimates,” “may,” “will,” “should,” and their variations identify forward-looking statements. Statements that refer to or are based on projections, uncertain events or assumptions also identify forward-looking statements. Many factors could affect Intel’s actual results, and variances from Intel’s current expectations regarding such factors could cause actual results to differ materially from those expressed in these forward-looking statements. Intel presently considers the following to be the important factors that could cause actual results to differ materially from the company’s expectations. 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