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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

To Compete, You Must Compute

Performance of Countries

Source: Top500.org
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 Infiniband Product Family

**Major Investments in Key Technology:**

**Barriers in HPC:**

**Intel® Xeon Phi™ CoProcessors**

**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

**Architecture Presence in Top 500**

Source: Top500.org

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HPC Expertise
Intellectual Property
World-class Interconnects

HPC Expertise
Fabric Management & Software
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Low-latency Ethernet Switching
Data Center Ethernet Expertise
High Radix & Low Radix Switch Products

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"Unparalleled productivity… most of this software does not run on a GPU"

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• 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
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