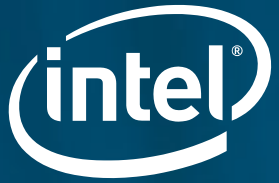

Intel Scalable System Framework

Many Workloads One Framework

Gary Paek

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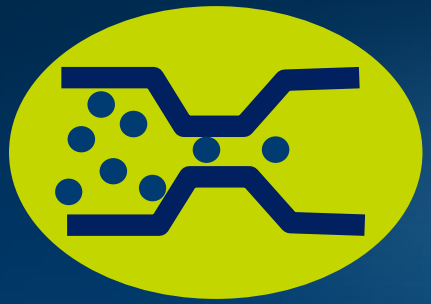
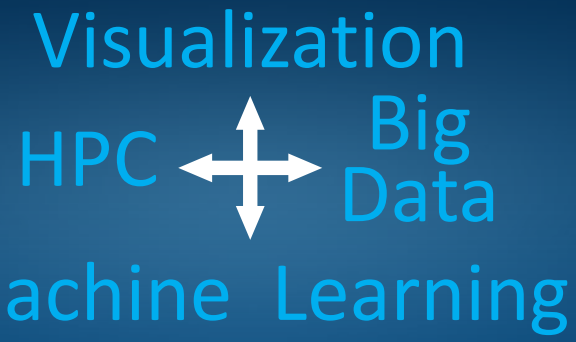
Growing Challenges in HPC

"The Walls"
System Bottlenecks



Memory | I/O | Storage Energy Efficient Performance Space | Resiliency | Unoptimized Software

Divergent Infrastructure

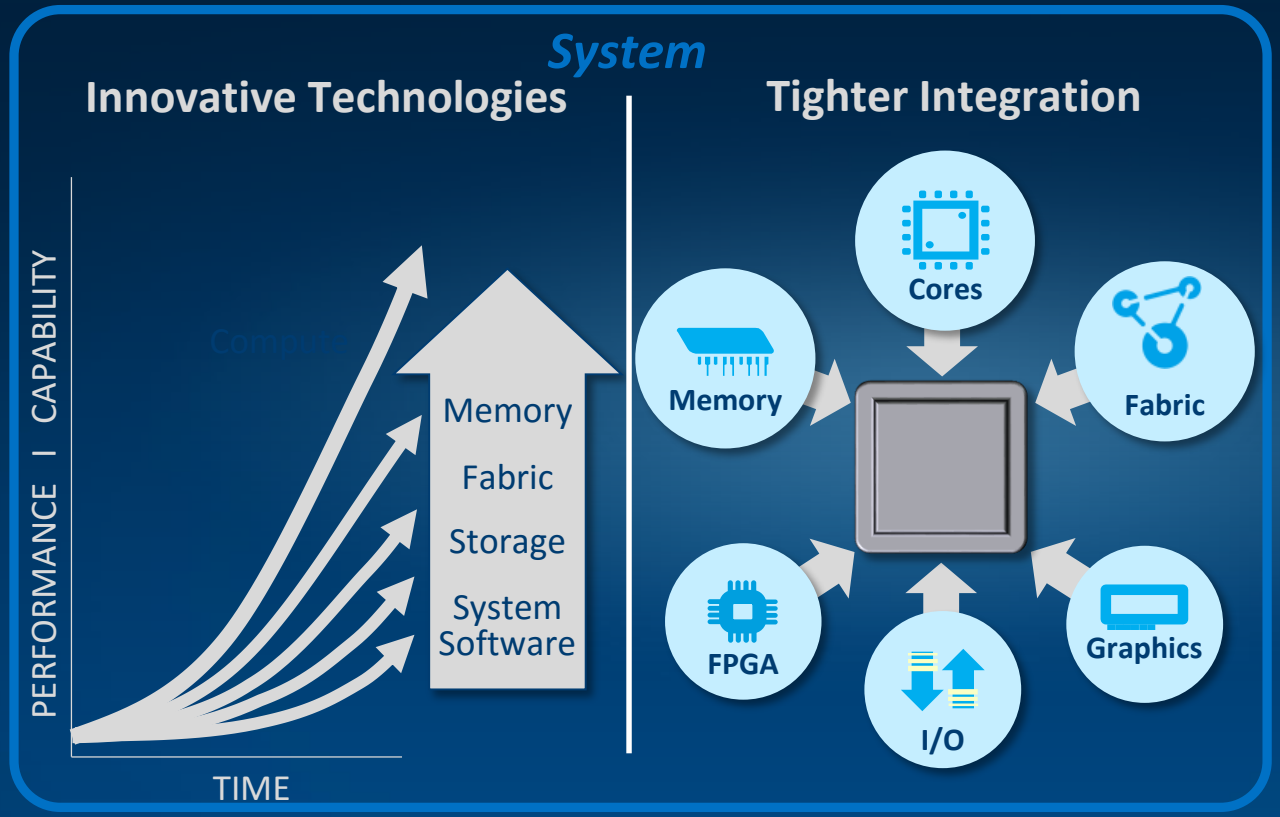


Resources Split Among Modeling and Simulation | Big Data Analytics | Machine Learning | Visualization

Barriers to Extending Usage

Democratization at Every Scale | Cloud Access | Exploration of New Parallel Programming Models

A Holistic Architectural Approach is Required



Application

Modernized Code

Community

ISV

Proprietary

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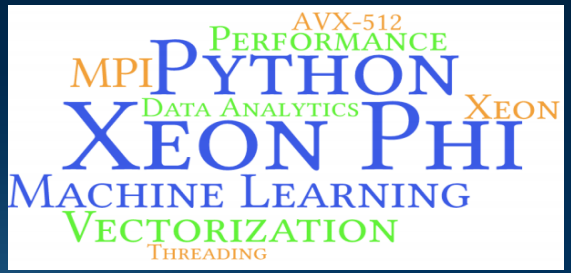

Highlights from 2017 edition

- **Faster Python* application performance** using Intel® Distribution for Python and Intel® VTune™ Amplifier XE.
- **Faster deep learning on IA** using Intel® Math Kernel Library and Intel® Data Analytics Acceleration Library
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http://intel.ly/perf-tools

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Many workloads I One Framework

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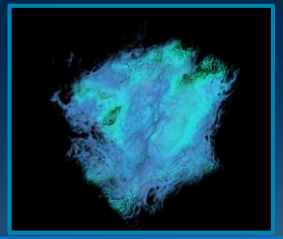
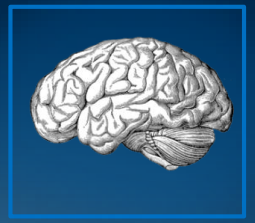
Modeling & Simulation

High Performance Data Analytics



Machine Learning



Visualization

Intel Scalable System Framework

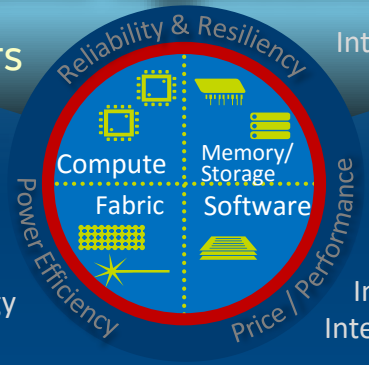
Intel® Xeon Phi™ Processors

Intel® Xeon® Processors

Intel® Omni-Path Fabric

Intel® Ethernet

Intel® Silicon Photonics Technology



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Intel SSF system recommendations

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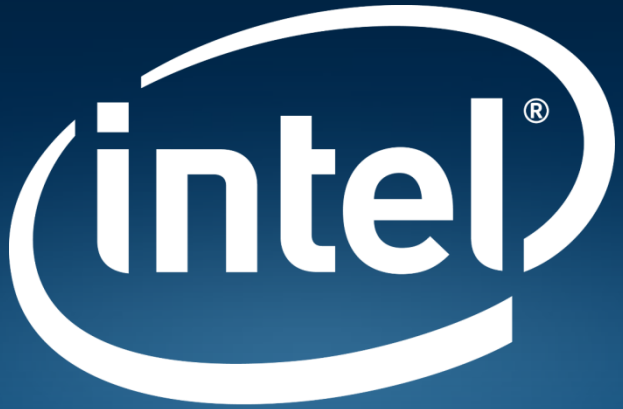

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