Vendor Update – Intel
49th IDC HPC User Forum

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In Next 5 Years, Make Cloud Security Equal to or Better Than Traditional Best In Class Enterprise Security

Available Today

Secure Cloud Data Centers: Intel VT & TXT, McAfee MOVE AV, McAfee ePO, Application Control

Secure the Connections: McAfee Cloud Security Platform

Secure User & Intelligent Devices: Intel Identity Protection Tech., McAfee Cloud Identity Manager, McAfee Deep Defender

Industry Collaboration: Accelerate Broad Adoption of Security Standards for Cloud & Enable Broad Range of Open, Interoperable Security Solutions

Hardware-enhanced Security + Software & Services Key To Achieve Mission

Intel® Xeon Phi™ Coprocessors Workload Suitability

Can your workload scale to over 100 threads?

Yes  No

Can your workload benefit from large vectors?

Yes

Can your workload benefit from more memory bandwidth?

Yes

If application scales with threads and vectors or memory bandwidth, Intel® Xeon Phi™ Coprocessors

* Theoretical acceleration of a highly parallel processor over a Intel® Xeon® parallel processor
Software, Drivers, & Online Resources
Intel® Xeon Phi™ Coprocessor

Software, Drivers, & Tools Downloads
Getting Started Development Guides
Video Workshops, Tutorials, & Events
Code Samples & Case Studies
Articles, Forums, & Blogs
Support & Product Links

http://software.intel.com/mic-developer
Check the “TRAINING” tab and “Events” link on http://software.intel.com/mic-developer
Getting Help On Programming – Intel® Xeon Phi™ Coprocessor

1. Intel® Developer Zone
   - Start at http://software.intel.com/mic-developer
   - Go to “Get Support” to get to the Intel® MIC Forums
   - Search for postings related to issue(s) or create new posting for your issue

2. Intel® Premier Support
   - Visit Intel® Premier Support at https://premier.intel.com
   - Available to users who have active licenses of Intel® software developer tools
   - Submit questions, problems, tech support issues
     - Issues get examined in 4 business hours
     - Monitor previously submitted issues

Please Note: For platform-related issues, contact your OEM

Check the “GET SUPPORT” tab on http://software.intel.com/mic-developer
The Advantages of Fabrics Integration

**Problem:**
- **Power** – System IO Interface Adds “10s Of Watts” Incremental Power
- **Cost & Density** – More Components On A Server Node
- **Scalability** – Processor Capacity & Fabric Bandwidth Scaling Faster Than System IO Bandwidth

**Solution:**
- Removing The System IO Interface From The Fabrics Solution **Reducing Power**
- An Integrated Fabrics Results In **Fewer Components On The Server Node**
- An Integrated Fabric **Balances Fabric and Compute, Scaling Application Performance & Efficiency**

Fabric Integration Required to Scale Performance & Power
Rack Scale Architecture

Optical Rack

Links To Spine

Fibers: Trays to Patch Panel 15 thin fibers connect all CPUs

TOR or Optical Patch Panel

10G/40G/100G TOR

Patch Panel with DCC Connectors

SiPh Optical Technology

4x25G SiPh Module

4x25G Socket

Mezzanine Fiber

Tray

Optical DCC Connector

Mezzanine Fiber

To Patch Panel/TOR

Mezzanine with 100G SiPh Processor removal does not require Mezzanine Fiber to be removed

Rack is configured once, ready for multi-generational use
Converged Storage Servers
Support Scale-out Architecture

Achieves Greater Deployment Flexibility:
- Performance & Efficiency
- Availability
- Management
- Capacity

**Storage Components**
- Enclosure
- Backplane
- SATA/SAS Cables
- IOC/HBA
- Solid State Storage
- Hard Disks

**Server Components**
- Server board
- Server chipset
- Server processor
- Server memory
- Network card
- Power supply

Converged storage servers deliver a cost-effective scale-out storage platform
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Requires a system with Intel® Turbo Boost Technology. Intel Turbo Boost Technology and Intel Turbo Boost Technology 2.0 are only available on select Intel® processors. Consult your PC manufacturer. Performance varies depending on hardware, software, and system configuration. For more information, visit http://www.intel.com/go/turbo

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