

A world map where the Americas (North and South America) are filled with a colorful, abstract pattern resembling a circuit board or data visualization. The rest of the world is a solid orange color. The map is partially obscured by blue geometric shapes in the foreground.

# Vendor Update – Intel 49<sup>th</sup> IDC HPC User Forum

**Mike Lafferty**  
**HPC Marketing**  
**Intel Americas Corp.**

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# Intel & McAfee: Securing the Cloud



*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<sup>1</sup>, 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*

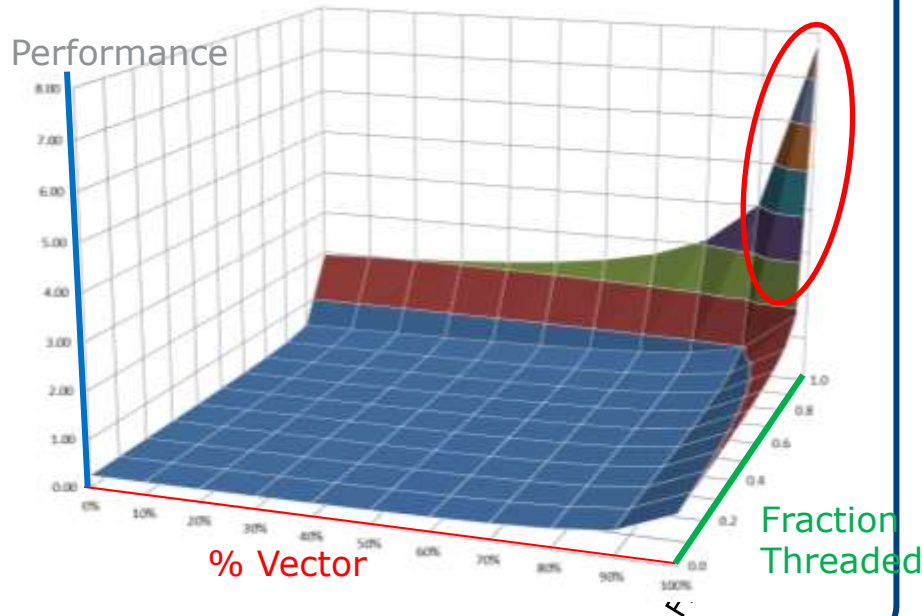
[www.intel.com/cloudsecurity](http://www.intel.com/cloudsecurity) [www.mcafee.com/datacenter](http://www.mcafee.com/datacenter)

REDEFINING WHAT'S POSSIBLE – TOGETHER.

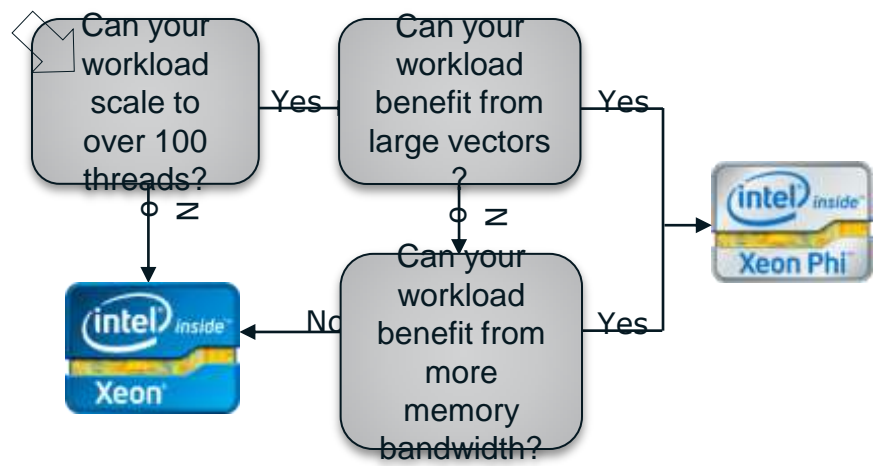
1 Integrating McAfee ePolicy Orchestrator (ePO) with Intel TXT requires custom integration work

# Intel® Xeon Phi™ Coprocessors Workload Suitability

## Suitability



\* Theoretical acceleration of a highly parallel processor over an Intel® Xeon® parallel processor



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

# Software, Drivers, & Online Resources Intel® Xeon Phi™ Coprocessor

Intel® Developer Center  
Intel® Xeon Phi™ Coprocessor

## Parallel Processing

Architecture for Discovery

intel inside  
Xeon Phi

OVERVIEW | TOOLS & DOWNLOADS | PROGRAMMING | TRAINING | CASE STUDIES | ARTICLES/FORUMS/BLOGS

Productivity via architecture innovation coupled with familiar software.

Intel® Xeon Phi™ coprocessor:

- Extends hardware support to higher degrees of parallelism with power savings
- Uses familiar and standard programming models to preserve investments
- Shares parallel programming with general purpose processor

Learn how your applications can benefit from Intel Xeon Phi coprocessors:

- Intel® Xeon Phi™ Coprocessor Architecture
- An Overview of Programming for Intel® Xeon® processors and Intel® Xeon Phi™ coprocessors
- Intel® Xeon Phi™ Coprocessor Developer's Quick Start Guide
- Intel® Xeon Phi™ Coprocessor Instruction Set Architecture Reference Manual

GET SUPPORT

Intel® Many Integrated Core Architecture Forum  
Parallel Programming Forum

GET MORE INFORMATION

Visit our Information Zones Server  
Parallel Programming

Attend an Event  
Feb 20-27th Live Webinar - Introduction to high performance application development for multicore and manycore

SOFTWARE DEVELOPMENT PRODUCTS

Intel® Cluster Studio XE  
Intel® Parallel Studio XE

PLATFORMS

Intel® Xeon Phi™ Coprocessor  
High Performance Computing

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>



# Training – Intel® Xeon Phi™ Coprocessor

## SW Development Tools & Programming Models

Parallel Processing  
Architecture for Discovery

OVERVIEW TOOLS & DOWNLOADS PROGRAMMING TRAINING CASE STUDIES ARTICLES / FORUMS / BLOGS

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Intel® Xeon Phi™ Coprocessor Performance

Events  
See What's Coming Up

OVERVIEW TOOLS & DOWNLOADS PROGRAMMING TRAINING CASE STUDIES ARTICLES / FORUMS / BLOGS

VIDEO WORKSHOPS AND TUTORIALS CODE SAMPLES BOOKS EXTERNAL TRAINING

Software Developer Workshop Videos

A technical guide to the software development environment for the Intel® Xeon Phi™ coprocessor

- Beginning Workshops
- Advanced Workshops
- Tools Workshops
- Webinars

Intel® Software Events

Featured Webinar:

Intel® System Studio: Complete Development Solution for Intel® Many Integrated Core Systems  
Watch IBM - Application news

Participate in engaging events that show how your software can take advantage of the latest processor technologies using new versions of Intel's software development tools.

Date	Event	Location	Description	More Info
March 25	Intel® System Studio Complete Development Solution for Intel® Many Integrated Core Systems Webinar	Online	Intel® System Studio enables embedded developers to accelerate their time-to-market, streamline system integration, and boost power efficiency and performance.	LEARN MORE
March 22	Change the Game: Best Practice in Deploying and Managing HPC Clusters with Intel® Xeon Phi™	Online	An IBM sponsored session featuring James VanDerKolk of Intel Corporation, a software engineer from SCA, and a Product Line Executive from IBM.	LEARN MORE

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

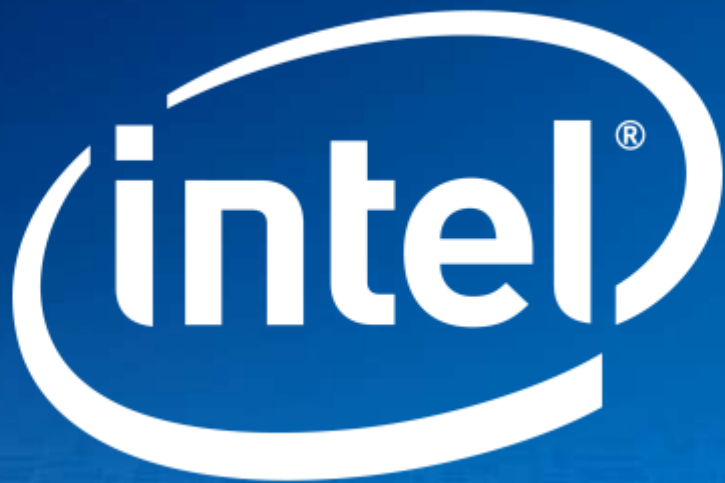
## 2. Intel® Premier Support

- 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

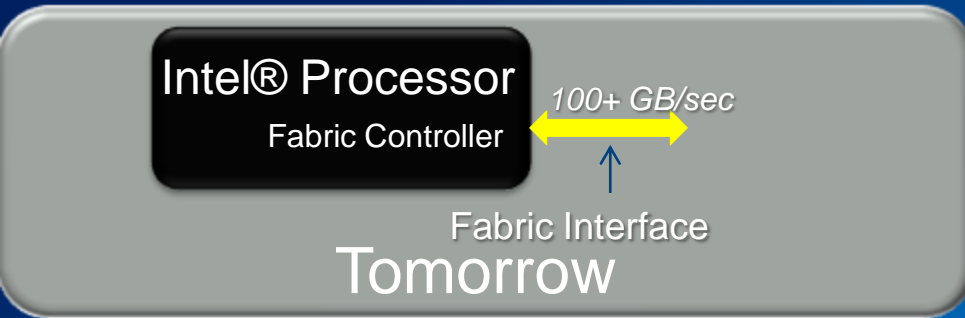
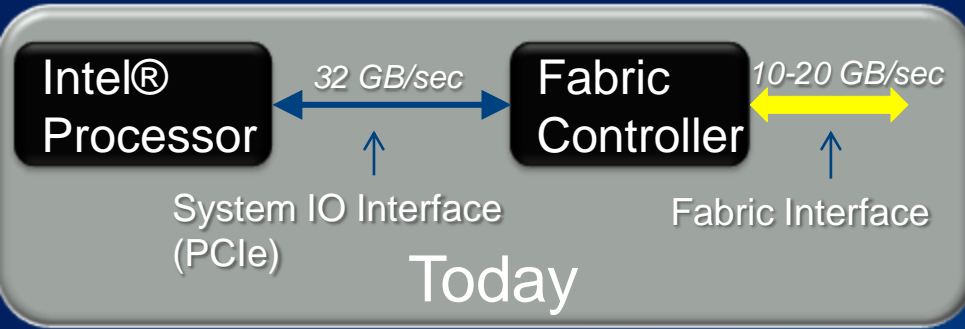
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# The Advantages of Fabrics Integration

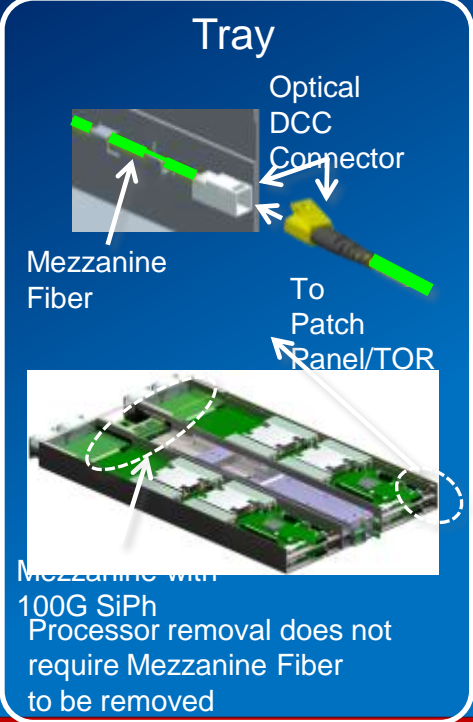
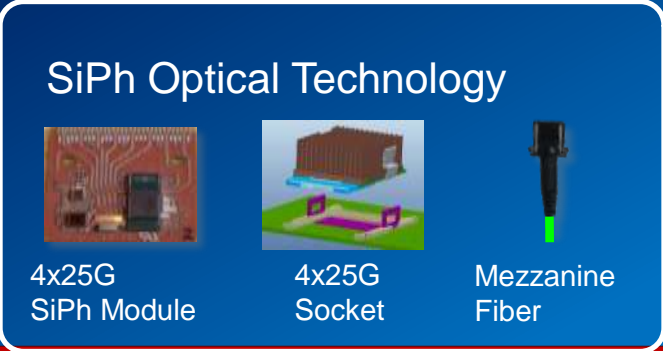
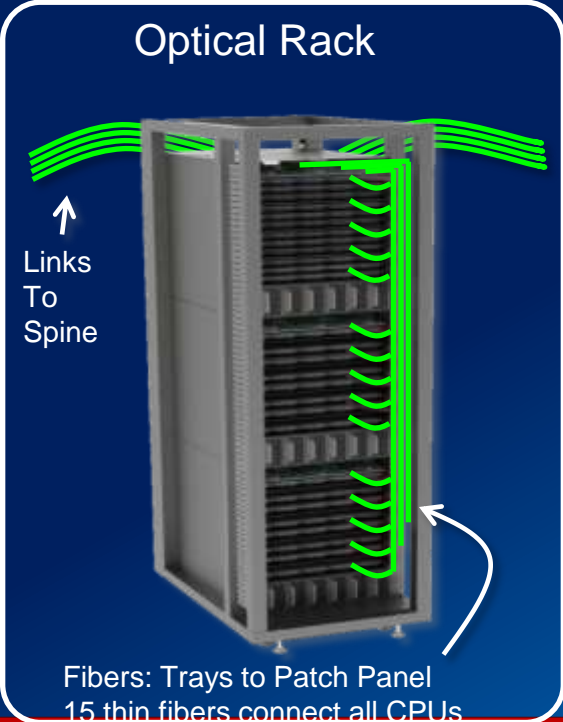


- Problem:
  - **Power** – System IO Interface Adds “10s Of Watts” Incremental Power
  - **Cost & Density** – More Components On A Server Node
  - **Scalability** – Processor Capacity & Fabric Bandwidth Scaling Faster Than System IO Bandwidth
- Solution:
  - Removing The System IO Interface From The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

Fabrics Integration Required to Scale Performance & Power



# Rack Scale Architecture



*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

**Converged storage server**

## Server Components

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

Metadata  
Server

Application  
Server

Storage  
Server

*Converged storage servers deliver a cost-effective scale-out storage platform*



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