The Cloud Evolution

Tom Kilroy, Vice President
General Manager, Digital Enterprise
Group

Agenda

- Intel Digital Enterprise Group

- Evolution of Cloud Computing

- Intel Activities In Cloud Computing

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Intel Digital Enterprise Group

**Paul Otellini
CEO Intel Corporation**

**Tom Kilroy,
Vice President & GM DEG**

Embedded & Communications Group
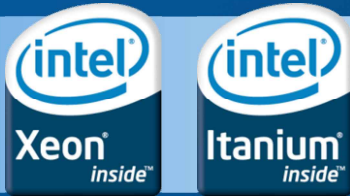
Server Platform Group

Business Client Group

Visual Computing Group

Engineering and Planning

*Deliver innovative platforms essential
to help businesses adapt and win*

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Enterprise Business Units

Server Products Group
- Intel Xeon & Itanium Platforms
- Classic Server Computing
- HPC, Internet Portals, Workstations

Business Clients Group
- vPro™ and cPro™ Platforms
- Focused on Manageability & Security

Embedded & Communications
- Atom™ and System-on-Chip IA parts
- Low power, saleable IA for embedded

Visual Computing
- Delivering Rich Visual Computing

Addressing Critical Enterprise Needs

4

Evolution of Computing

Mainframes   Client/Server   Web   ASP   Cloud

Providing more flexibility, manageability, automation & efficiency

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Technologies That Enable Cloud

Broadband Access & Capacity
2X the penetration and half the price

Software Scale
Programming models that harness multi-core

Open Source Maturity
Accelerates development velocity

Virtualization
Dynamically assign resources

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Service Models Evolve

Infrastructure as a Service   Platform as a Service   Software as a Service

Business models change to pay-per-use for customers

Service Level Agreements become key differentiation

Web development platforms increase application adoption

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Consumer Cloud Models

- Search
- Commerce
- Social Networking
- Email

Google   facebook   🍎   amazon.com.

New Content Portals

- Exclusive content
- Instant purchase
- Borderless

New Devices

- Cellular phones
- Laptops & Netbooks
- Mobile Internet Devices

Cloud is pervasive with consumers.

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Cloud In Small/Medium Business

- Productivity Applications

- CRM

- Financial Management

Salesforce
Platform for CRM

amazon webservices™
Platform for startups

Intuit
Platform for financial needs

Powerful Browsers

- Plug-ins for content and application speed

Rich Internet Apps

- Off-network mobility
- Full visualization

Cloud creates new application platforms.

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Large Enterprises

- Non strategic applications

- Viral Marketing & Social Networks

- Productivity Applications

End user value

- Zero capital outlay
- Speed of deployment
- Pay only for resources used
- No H/W or S/W to maintain

Vendor platforms

Google Docs BETA   ORACLE

Platform for office productivity   Platform for data management

Incredible promise for IT, but …

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Barriers to Large Enterprise Adoption

Legacy Investments — Proprietary, business critical needs

Compliance — Legal frameworks unknown

Security — Guarantees are unlikely

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Intel Strategy

1 Win enterprise clouds with superior products, platforms, and technologies

2 Optimized solutions for very large Internet Portal Data Centers

3 Be the standards leader for critical cloud computing technologies

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Intel's High Efficiency, Performance CPU

Today

2009
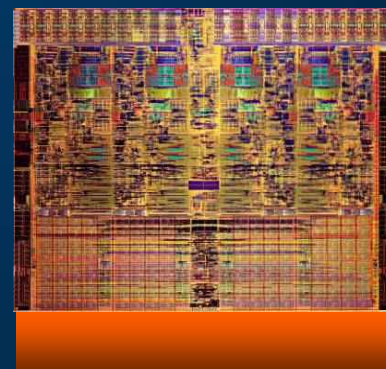
Intel Xeon L54xx Series

"Nehalem"

Low Voltage Quad-Core

- **25% higher performance**[1]
- Low voltage quad core
- **35% less power** consumption vs. 80w mainstream processors

- **Highest Available Performance**
- Integrated Memory Controller
- Dynamic Power Management

Deployed today in leading datacenters

Now seeding major Cloud Customers

Internet Portal Data Centers

Industry Leadership

IEEE

Data **C**enter **E**thernet

Data **C**enter
Manageability
Interface

the green grid

Open Cirrus™
the Cloud Computing Testbed

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Summary

- Cloud is a compute paradigm of unprecedented scale

- Cloud is moving aggressively into businesses large & small.

- Intel provides global leadership in cloud computing

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