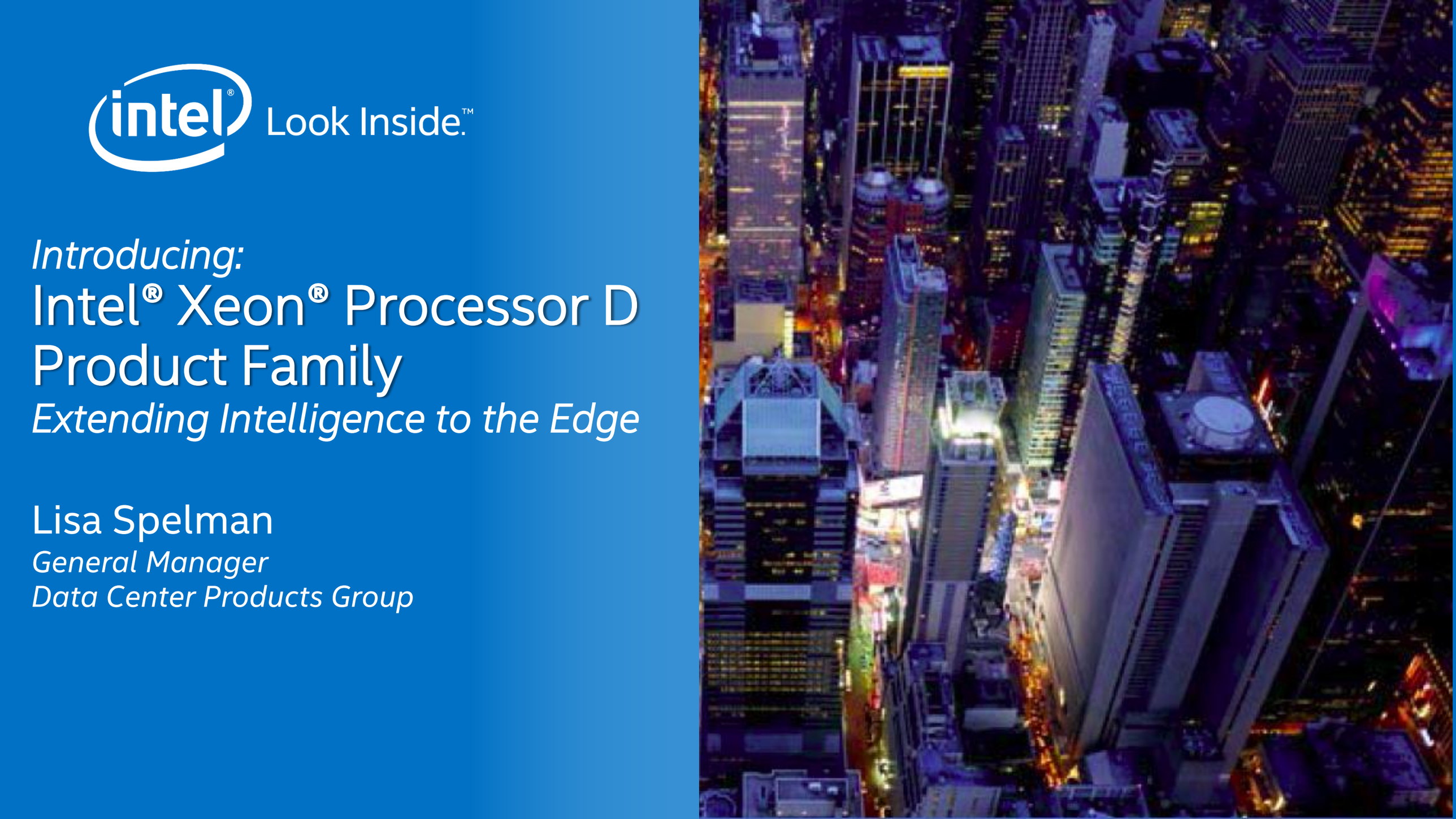

Introducing:

Intel® Xeon® Processor D Product Family

Extending Intelligence to the Edge

Lisa Spelman

General Manager

Data Center Products Group

Optimization Notice

Optimization Notice

Intel's compilers may or may not optimize to the same degree for non-Intel microprocessors for optimizations that are not unique to Intel microprocessors. These optimizations include SSE2, SSE3, and SSE3 instruction sets and other optimizations. Intel does not guarantee the availability, functionality, or effectiveness of any optimization on microprocessors not manufactured by Intel.

Microprocessor-dependent optimizations in this product are intended for use with Intel microprocessors. Certain optimizations not specific to Intel microarchitecture are reserved for Intel microprocessors. Please refer to the applicable product User and Reference Guides for more information regarding the specific instruction sets covered by this notice.

Notice revision #20110804

Today's News

Intel® Xeon® Processor D-1500 now in production

1st ever Xeon SoC - 3rd generation 64-bit SoC

Up to 3.4x[1] more performance vs. Intel® Atom™ Processor C2750

Foundation for extending intelligence beyond core data center

>50 systems in design

Network, Storage, IoT, Microservers

1 Up to 3.4x better performance on Dynamic Web Serving
Intel® Xeon Processor D-based reference platform with one Pre-Production Xeon Processor D (8C, 1.9GHz, 45W, Turbo Boost Enabled, Hyper-Threading enabled, 64GB memory (4x16GB DDR4-2133 RDIMM ECC), 2x10GBase-T X552, 3x S3700 SATA SSD, Fedora* 20 (3.17.8-200.fc20.x86_64, Nginx* 1.4.4, Php-fpm* 15.4.14, memcached* 1.4.14, Simultaneous users=43844
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Rise of Digital Services Economy

The Explosion of Devices, Data, and Digital Services

Devices	Data	Services
50B Devices by 2020[1]	44 Zetabytes by 2020[2]	$450B in Digital Services Revenue[3]
10x	10x	2x

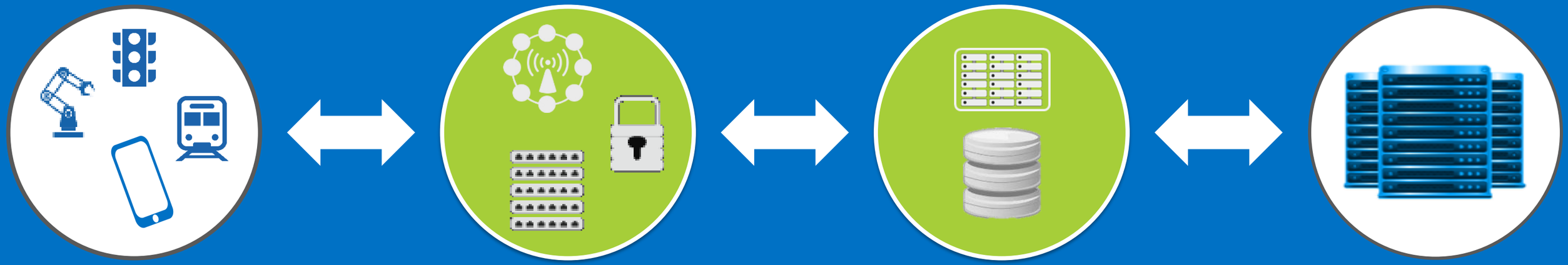
Underlying infrastructure needs to scale

1 Source: IDC.

2 IMC/EDC: The Digital Universe of Opportunities.

3: Source: iDATA /Digiworld, 2013.

Barriers to Efficient Scaling



Telecommunication Service Providers

- Monetize infrastructure
- Rapidly provision
- Deliver edge analytics

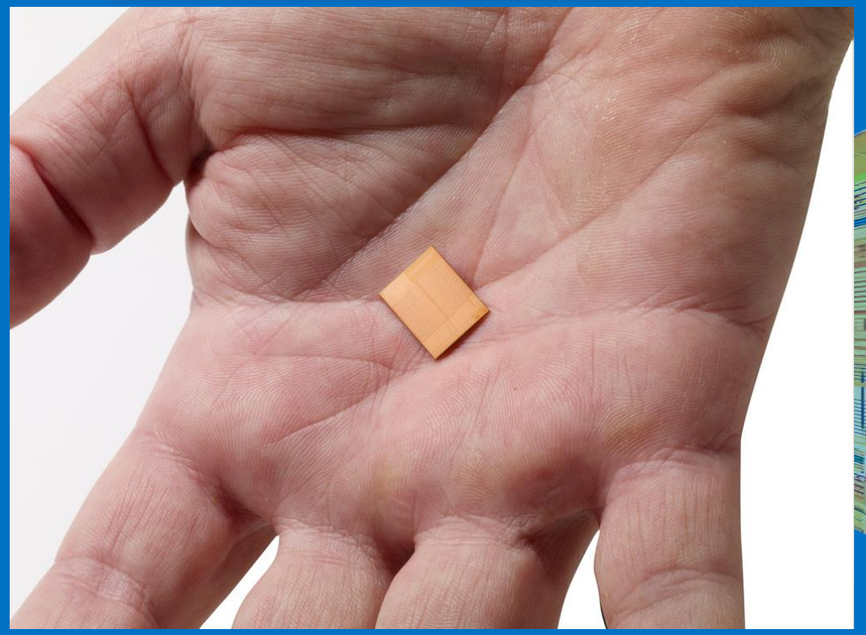
Cloud Service Providers

- Scale faster
- Service more users
- Space / power constraints

Announcing the Intel® Xeon® Processor D-1500

Utilizing 20 Years of Data Center Experience

IN PRODUCTION



System on a Chip (SoC)

Intel 14nm process technology

Intelligent

Xeon performance and features

RAS, Intel® Virtualization Tech, Platform Storage Extensions, Intel® AES-NI

Dense

Integrated Intel® Ethernet & I/Os

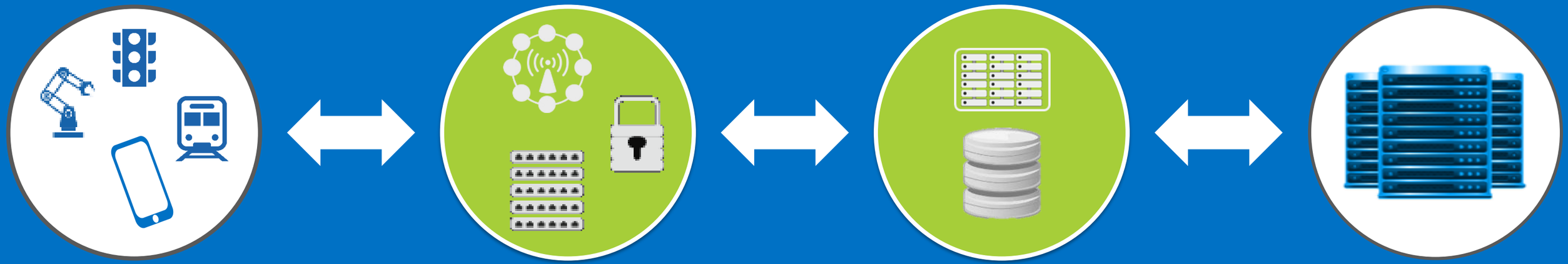
~20 – 45 W

Agile

IA Software Compatible

Software scalability across platforms

Extending Intelligence to the Edge



Intel® Xeon® Processor D Product Family

Intel® Xeon® Processor E5 Product Family

2nd Half of 2015

Today's Focus

Introducing: Intel® Xeon® Processor D-1540 and D-1520

ANNOUNCING TODAY

Two Optimized SoCs Available Today

- D-1540 (8c/16t, 2GHz, 45W)
- D-1520 (4c/8t, 2.2GHz, 45W)

Intel® Xeon® Processor Performance

- Up to **3.4x**[1] better performance
- Up to **1.7x**[1] better performance/watt

Integrated 2 x 10GbE Intel® Ethernet, I/Os

- Up to **5x**[2] better network bandwidth
- Integrated I/Os (24x PCIe 3, 8x PCIe 2, 6x SATA3, 4x USB etc.)

Enhanced Memory Architecture

- DDR4 DIMMs, up to 12MB L3 cache
- 128 GB addressable memory

Compared to Intel Atom™ C2750

1 Up to 3.4x better performance and perf/watt on Dynamic Web Serving

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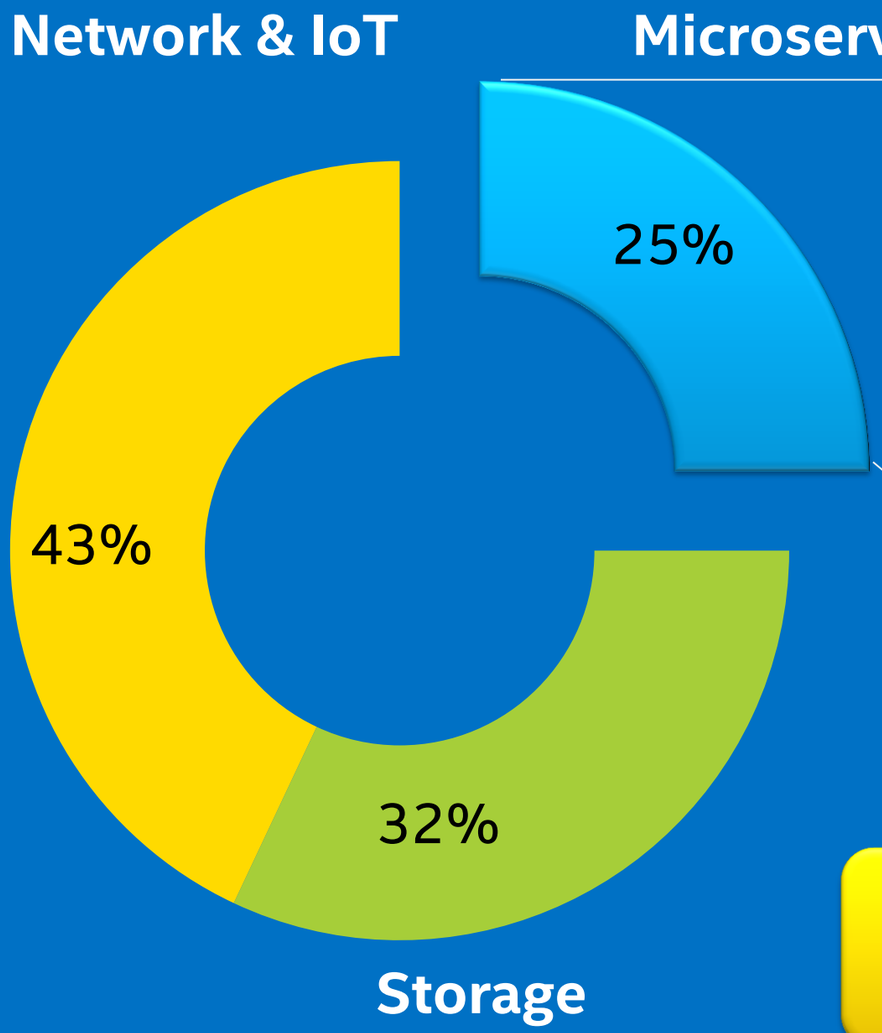
2 Calculated bandwidth – 1 Gbps x 4 for Atom C2750. 10 Gbps x 2 for Xeon D-1540 = 5x increase in bandwidth.

Over 50 Intel® Xeon® Processor D based system designs



Intel® Xeon® Processor D-1500 Microserver Systems

CISCO
hp
NEC
QCT Quanta CLOUD TECHNOLOGY
中科曙光 Sugon
SUPERMICRO

More details on Storage, Network, and IoT optimized SoCs and OEMs in 2H'15

Broad Intel Architecture (IA) Ecosystem

Deep enabling relationships w/ software and solution providers

- 7K[1]+ software ISVs worldwide
- 1K[1]+ downstream channel partners

Significant Intel investments in software capabilities and expertise

- 100+ million person hours[1] spent optimizing applications on IA

LINUX FOUNDATION

Intel: The # 1 contributor to Linux open source

Source: Feb 2015 Linux Foundation Report

1 - Based on Intel estimates

Recapping Today's News

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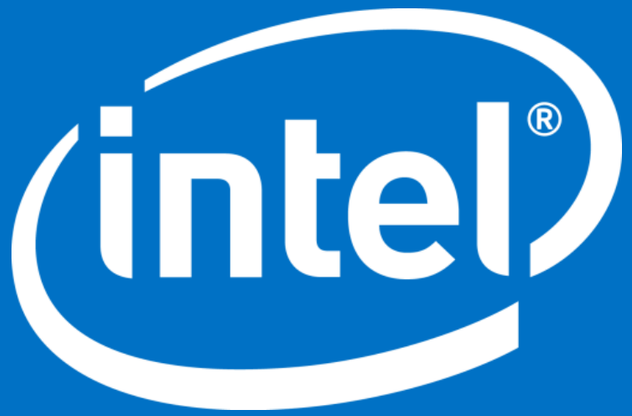
intel