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Intel Makes Move to the Cloud Faster, Easier

NEWS HIGHLIGHTS

- Intel® Xeon® processor E5-2600 v4 product family delivers the foundation for modern, software-defined clouds.
- New Intel® SSDs, including Intel's first 3D NAND drives optimized for cloud and enterprise workloads, deliver fast, dependable data access.
- Collaborations with leading cloud software and solution providers, new industry programs help accelerate businesses' access to enterprise-ready, easy-to-deploy cloud solutions.

SANTA CLARA, Calif.--(BUSINESS WIRE)-- Intel Corporation today announced a range of new technologies, investments and industry collaborations aimed at making it easier to deploy agile and scalable clouds so businesses can deliver new services faster and drive revenue growth.

This Smart News Release features multimedia. View the full release here: http://www.businesswire.com/news/home/20160331006192/en/

Intel® Xeon® processor E5-2600 v4 product family delivers the foundation for modern, software-defined clouds (Photo: Business Wire)

Businesses want flexibility and choice in cloud deployment models to support innovation while maintaining control of their most strategic assets. Despite a willingness to invest in modern software-defined infrastructure (SDI)[1], businesses find the prospect of doing so themselves to be complex and time-consuming.

Intel is easing the path with new processors, solid state drives and a range of industry collaborations to help businesses deliver new services at the scale and speed previously found only in the most advanced public clouds.

"Enterprises want to benefit from the efficiency and agility of cloud architecture and on their own terms – using the public cloud offerings, deploying their own private cloud, or both," said Diane Bryant, senior vice president and general manager of Intel's Data Center Group. "The result is pent-up demand for software-defined infrastructure. Intel is investing to mature SDI solutions and provide a faster path for businesses of all sizes to reap the benefits of the cloud."

Key Ingredients for the Modern Cloud

SDI is the foundation for the most advanced clouds in the world. It makes the delivery of

cloud services faster and more efficient by dynamically allocating the required compute, storage and network resources through intelligent software, carefully orchestrating the delivery of applications and services on-demand and across many users.

The Intel® Xeon® processor E5-2600 v4 product family, built on 14nm process technology, provides the key ingredients for SDI including Intel® Resource Director Technology, which enables customers to move to fully automated SDI-based clouds with greater visibility and control over critical shared resources like processor caches and main memory. The result is intelligent orchestration and improved utilization and service levels.

The new product family delivers improved performance for cloud tasks with more than 20 percent more cores and cache than the prior generation[2], supports faster memory, and includes other integrated technologies for accelerating a wide range of server, network and storage workloads. Security enhancements like workload isolation, security policy enforcement and faster cryptography[3] have been added to help protect data more effectively.

For fast and reliable data access to the cloud, Intel unveiled new solid state drives (SSDs) optimized for the Intel Xeon processor E5-2600 v4 family, enterprise storage and cloud deployments. The Intel® SSD DC P3320 and P3520 Series are the first Intel SSDs to use the industry's highest density 3D NAND technology to provide users with a highly efficient, dense storage solution. The DC P3320 offers up to a 5-times performance boost compared to SATA-based SSDs[4].

The new Intel SSD DC D3700 and D3600 Series are Intel's first dual-port PCI Express* SSDs using the Non-Volatile Memory Express (NVMe) protocol. The dual-port design provides critical redundancy and failover, safeguarding against data loss in mission-critical storage deployments. Customer systems using the D3700 can see up to a 6-times increase in performance over today's dual-port SAS solutions[5].

Unleashing Tens of Thousands of New Clouds

As part of the Intel® Cloud for All initiative, Intel is investing in others in the industry to accelerate SDI-enabled clouds, optimizing key technologies, and aligning the industry to drive the development of standards and easy-to-deploy cloud solutions.

- Intel is collaborating with CoreOS* and Mirantis* to bring together two of the most popular open source technologies to orchestrate container and virtual machine-based applications. The merging of these two technologies into a single solution will simplify choices for cloud operators to accelerate the adoption of cloud solutions.
- Intel and VMware* announced a network of Centers of Excellence aimed at accelerating cloud deployments. The centers will drive custom optimizations, facilitate proof-of-concept testing and integrate cybersecurity best practices in collaboration with The National Institute of Standards and Technology*.
- Cloud Native Computing Foundation (CNCF) and Intel announced the world's largest cloud application testing cluster for applications "born in the cloud." The cluster will include more than 1,000 Intel Xeon processor-based server nodes designed to provide developers with the opportunity to test applications at larger scales and deliver

the efficiency and portability of cloud native applications to businesses.

- Intel is expanding its Cloud Builders program to include SDI use cases and accelerate ecosystem optimization efforts that allow customers to take full advantage of infrastructure as a service (IaaS) orchestration and automation. The new Storage Builders program also aims to accelerate the industry's use of cloud-ready, next-generation storage solutions by fostering greater innovation by matchmaking between in the cloud ecosystem. Intel currently has more than 300 member companies across its cloud, storage and network "builders" programs.

About Intel

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[1]According to industry analyst firm 451 Research, 67 percent of enterprises are planning to increase spending on SDI in 2016. 451 Research Voice of the Enterprise: Software Defined Infrastructure Survey: 2016 Spending Trends in Software Defined Infrastructure (SDI). March 2016

[2] Intel® Xeon® Processor E5-2600 product family (22C, 55M Cache) compared to Intel® Xeon® Processor E5-2600 v3 product family (18C, 45M Cache)

[3] 1-Node, 2 x Intel® Xeon® Processor E5-2697 v3 @ 2.1GHz on Grantley-EP with 64 GB Total Memory on SUSE Linux Enterprise Server* 12 using haproxy* 1.6.3 and OpenSSL 1.0.2f versus 1-Node, 2 x Intel® Xeon® Processor E5-2699 v4 @ 2.1 GHz on Grantley-EP with 64 GB Total Memory on SUSE Linux Enterprise Server* 12 using haproxy* 1.6.3 and OpenSSL 1.0.2f.

[4]Performance comparison between 2TB Intel® SSD DC P3320 with 1.6TB Intel® SSD DC S3510. Performance results have been simulated using an IOMeter and Intel® CoFluent™ modeling. Any differences in your system hardware, software or configuration may affect your actual performance.

[5] Source: X-IO Technologies* Project Axellio using Intel SSD DC D3700 vs. SAS SSD performance comparison.

Configuration - External Host running Windows* server 2008. External host specifications: HP DL360, G7 with dual Intel E5-2620 and 25GB ram. Storage array system using E52699v3 with 40 Intel DC D3700 10 DWPD 800GB & Storage array system using E52699v3 with 40 SAS 10 DWPD 400GB . Test included 8K transfer with 80/20 Read/Write workload on QD 1,2,4 accessing 1 volume on the shared storage array. Measurements were taken on an IOMeter.

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