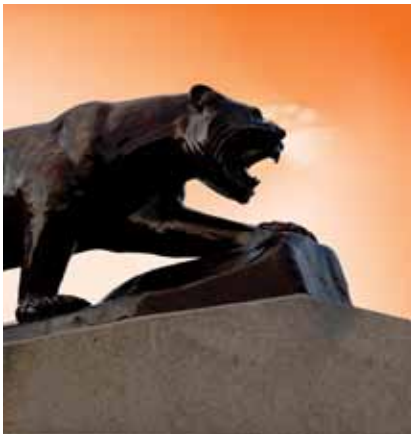
SUCCESS BRIEF
Intel® Xeon® processor E5 family
Education
Technical Computing in the Cloud

Fast Throughput for Big Data

Clemson expects 1.5x more bandwidth and 2x faster floating-point performance with the Intel® Xeon® processor E5 family



CLEMSON UNIVERSITY

"Intel's new bus will give us a lot more throughput to deal with data more efficiently and handle parallel I/O. Getting double the floating-point performance will be important to many of our enterprise and HPC users."

– Boyd Wilson,
Executive Director,
Computing Systems and Operations,
Clemson University

INSTITUTION

Founded in 1889, Clemson University ranks as the 25th-best public university in the United States.[1] Clemson Computing and Information Technology (CCIT) deploys scalable, world-class infrastructure that supports the university and its research affiliates throughout the United States. CCIT also runs enterprise applications, provides disaster recovery services for major state agencies, and hosts the South Carolina Cloud.

CHALLENGE

Clemson's storage growth has doubled over the past two years as CCIT deploys new cloud services, users find creative ways to work with data, data sets increase in size and number, and data retention requirements rise. CCIT looks for flexible server technologies that provide higher computational performance and faster ways to move data.

SOLUTION

CCIT tested a Dell PowerEdge* R720 server with the Intel® Xeon® processor E5-2600 product family. CCIT focused on the Intel Xeon processor E5 family's increased floating-point performance enabled by Intel® Advanced Vector Extensions (Intel® AVX), as well as the higher bandwidth enabled by features such as integrated support for PCI Express* (PCIe) 3.0. The Dell servers also incorporate Intel® Ethernet 10 Gigabit Server Adapters.

BENEFITS

CCIT leaders say Intel's new processor will accelerate data movement into compute nodes and out to storage nodes. Based on their tests, they expect the Intel Xeon processor E5-2600 product family to deliver more than a 1.5-fold improvement in bus throughput over the Intel Xeon processor 5600 series. They also expect double the floating-point performance on a wide range of HPC and enterprise workloads over the previous-generation platforms. They aim to use Intel Ethernet 10 Gigabit Server Adapters with the iSCSI protocol to improve storage network performance and costs.

CCIT leaders expect to incorporate the new processor into their cluster and cloud infrastructure, and say the processor family's performance, throughput, and feature enhancements can help accelerate scientific advances, enable state agencies to operate more efficiently, and expand South Carolina's knowledge economy.

Find the solution that is right for your organization. Contact your Intel representative, visit **Intel's Business Success Stories for IT Managers**, or explore the **Intel IT Center**.

[1] See http://colleges.usnews.rankingsandreviews.com/best-colleges/rankings/national-universities/top-public.

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