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intel.

Intel Powers World's Fastest Supercomputer

NEWS HIGHLIGHTS

-- Tianhe-1A supercomputer, featuring more than 14,000 Intel(R) Xeon(R)
   5600 series processors, is No. 1 supercomputer on 36th edition of TOP500
   list.
-- Intel's TOP500 ranking has grown incredibly in ten years, going from
   just six systems in the November 2000 list to 398 or nearly 80 percent
   today, including three of the top five.
-- Intel demonstrates applications powered by Intel(R) Many Integrated Core
   (MIC) architecture.

NEW ORLEANS--(BUSINESS WIRE)-- Intel Corporation today announced that its Intel(R) Xeon(R) 5600 series processors, announced earlier this year, are at the heart of the world's most powerful supercomputer, the Tianhe-1A. Located at the National Supercomputing Center in Tianjin, China, Tianhe-1A contains 14,396 Intel processors accompanied by accelerator cards, and has demonstrated groundbreaking performance of 2.57 petaflops (quadrillions of calculations per second).

In partnership with Inspur, a computer manufacturer in China, Intel worked closely with the National Supercomputing Center and its technology partners to achieve this groundbreaking performance.

The 36th edition of the TOP500 list of supercomputers, as announced at SC10, Nov. 13-19 in New Orleans, shows that nearly 80 percent of the world's top 500 systems have Intel processors inside. Such machines are increasingly featured in computers designed for geophysics, financial calculations and scientific research focusing on mainstream applications such as improving the safety of football players and enhancing medical imaging. According to the list, Intel chips now power three of the top five systems - in addition to the No. 1 system. Xeon(R) 5600 series processors are a key building block in the No. 3 system (Shenzhen), and the newly listed No. 4 system at the Tokyo Institute of Technology. The New Intel(R) Xeon(R) Processor 7500 series is featured in the Bull Supernode system at CEA, newly listed at No. 6. Intel's ranking has grown incredibly in ten years, going from just six systems in the November 2000 list to 398** or nearly 80 percent today.

"Our Xeon processor roadmap continues to deliver hugely powerful supercomputers that are helping solve mankind's greatest challenges," said Rajeeb Hazra, general manager of Intel's High Performance Computing organization. "Securing the top position on the Top500 is also a source of great pride for us, and demonstrates the tremendous leaps in performance and versatility that our processors are delivering across a range of compelling workloads."

Additional TOP500 Success

In addition to the Tianjin supercomputer, 17,296 Intel chips power the No. 6 system on the list. The CEA system from Bull features the largest shared memory system built around the Xeon(R) 7500 series processor, achieving performance in excess of one petaflop.

Another notable supercomputer hails from the Tokyo Institute of Technology. Featuring Xeon(R) 5600 series processors within an NEC/HP system, this No. 4-ranked supercomputer achieved 2.4 petaflops.

The semi-annual TOP500 list of supercomputers is the work of Hans Meuer of the University of Mannheim, Erich Strohmaier and Horst Simon of the U.S. Department of Energy's National Energy Research Scientific Computing Center, and Jack Dongarra of the University of Tennessee. The complete report is available at www.top500.org.

Intel(R) Many Integrated Core (MIC) Demonstrations

During SC10, Intel conducted demonstrations showcasing the real-world capabilities of the recently announced Intel(R) Many Integrate Core (MIC) "Mike" architecture. These include using Intel(R) MIC architecture as a co-processor running financial derivative Monte Carlo demonstrations that boasted twice the performance of those conducted with prior generation technologies. The Monte Carlo application for Intel(R) MIC was generated using standard C++ code with an Intel(R) MIC-enabled version of the Intel(R) Parallel Studio XE 2011 software development tools, demonstrating how applications for standard Intel CPUs can scale to future Intel(R) MIC products.

Intel also showcased breakthrough compressed medical imaging developed with Mayo Clinic on "Knights Ferry," the first Intel MIC design and development kits. This demonstration used compressed signals to rapidly create high-quality images, reducing the time a patient has to spend having an MRI.

About Intel

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