

Press Release

GPU-accelerated SGI Servers Enable Department of Geosciences at Princeton University to Simulate Seismic Activity in Record Time

Leading University Installs SGI® Rackable® Servers with NVIDIA Tesla GPU Accelerators, Enables Seismic Activity to be Simulated 32x Faster

FREMONT, CA—June 24, 2013— SGI (NASDAQ: SGI), the trusted leader in technical computing and Big Data, today announced its NVIDIA® Tesla® GPU-powered SGI Rackable servers have been deployed in the Department of Geosciences at Princeton University to drive next-generation earthquake research. The department will utilize five main open-source software packages and is leveraging NVIDIA GPUs for the SPECfem3D ‘Sesame’ application, which simulates seismic wave propagation on regional and global scales.

“SGI provided the engineering expertise and capability of running the benchmark in the configurations we were seeking,” said Curt Hillegas, director of Research Computing at the University's Office of Information Technology. “They created complete NVIDIA Tesla accelerator solutions with full integration and testing in the factory so that when the Rackable server arrived it was ready to be plugged in and put into operation, solving complex problems almost immediately.”

The installation includes 200 NVIDIA Tesla K20 GPU accelerators with four K20 GPUs per each 2U Rackable server. It enables the Department of Geosciences to report on seismic activity, via the Global Seismicity Portal, in 15-30 minutes as compared to two to eight hours previously. The portal was designed to present the public with near real-time visualizations of recent earthquakes.

“The need for computing power at lower power consumption continues to be a key customer requirement and customers are benefitting from the highly accelerated code and leading performance per watt capability offered with NVIDIA Tesla GPUs,” said Bill Mannel, vice president Product Management, Server Products at SGI. “Customers are developing finer meshes, larger models and problems, higher sampling rates and resolutions. These problems are often being solved using Tesla accelerators.”

Achieving a 30-percent year over year* increase in the sales of NVIDIA GPUs shipped, SGI is underscoring a growing demand for the performance and efficiency benefits of NVIDIA Tesla GPU

accelerators across a range of scientific and commercial fields. In response to growing demand for GPUs, SGI plans to add to its wide portfolio of NVIDIA-inspired solutions by adding liquid-cooled GPU server blades to SGI ICE X products, providing customers in the defense, manufacturing, research, and other sectors, with new levels of energy-efficient and high-performance computing (HPC) solutions.

“SGI’s impressive sales growth demonstrates that accelerators have become the preferred technology to drive innovation and accelerate scientific research,” said Sumit Gupta, general manager of the Tesla Accelerated Computing Business at NVIDIA. “With hundreds of supported applications, hundreds of thousands of developers, and broad support from system vendors, GPU accelerators will soon power the vast majority, if not all, HPC systems around the world.”

Availability

NVIDIA Tesla K10, K20 and K20X GPU accelerators are available in the following SGI platforms:

- SGI® UV™2000, with scalability out to 64 TB in a single server, the UV2000 can support up to 16 Tesla GPUs
- Dense Rackable servers, featuring the dense C1104G or C2110G servers for up to 4 Tesla GPUs in a single server
- The Rackable C2108 and UV20 servers that offer larger memory and I/O footprints and up to 2 Tesla GPUs vs. typical dual-socket servers
- In less dense configurations, Tesla GPUs can be hosted in an SGI ICE X fabric via Rackable service nodes

All SGI UV and Rackable solutions are available and shipping today. Specific support for NVIDIA Tesla GPUs varies with the platform. Limited numbers of Tesla GPU accelerators can be configured in ICE X solutions via specialty nodes today as well. Details of an ICE X liquid-cooled solution will be available later in the year.

About SGI

SGI, the trusted leader in technical computing, is focused on helping customers solve their most demanding business and technology challenges. Visit sgi.com for more information.

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**"year over year" represented is based on calendar years 2011 and 2012.*