

SGI® Cyclone™, LS-DYNA® and Takata A User Success Story



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—John O. Hallquist,
President,
LSTC

Key Customer Facts

Organization—Takata Corporation

Established—1933

Business—Manufacture and sale of motor vehicle seat belts, airbags, steering wheels, electronic modules, interior trim, industrial textiles and child restraint systems

Employees—31,154 (as of March 2010)

Plants—46 plants in 17 countries (as of Sept. 2010)

Organizations that rely on HPC resources are increasingly investigating cloud computing as a solution that offers additional computing capacity and flexibility. Clouds reduce or eliminate altogether the need to make incremental long-term, often costly, hardware and infrastructure investments. To date, cloud solutions have focused primarily on running important business applications like CRM, ERP, HR, email and other database programs, rather than on technical or engineering applications.

So when SGI began to design our HPC cloud solution we were razor focused on the need to offer customers the broad array of scientific and engineering applications that they currently use to drive innovation and create new products. SGI Cyclone presently offers end users a selection of over 20 technical open source and third party ISV applications, including LS-DYNA.

In February 2010, when SGI launched the Cyclone offering, two service models for customers were made available: Software as a Service (SaaS) and Infrastructure as a Service (IaaS). LSTC was one of the first ISVs to sign up for the SGI Cyclone SaaS offering, allowing joint customers to purchase from SGI additional licenses to run their LS-DYNA simulations in Cyclone on demand.

“LSTC and SGI have a long history of working together. It was natural that we would partner together to deliver LS-DYNA, as a software service in the cloud,” said John O. Hallquist, president, LSTC. “SGI offers a team of technical application engineering experts, who for years have supported the optimization and benchmarking of our software on their supercomputing hardware architectures.”

“From the moment we started talking with the SGI Cyclone team I felt confident that we were going to hit our deadline goal. We were assigned a technical and account manager who walked us through the process, and quickly got us a Statement of Work that outlined the pricing terms and service level agreement. We were asked which LS-DYNA version we currently used in-house so they could have the exact version ready to go on the SGI Altix ICE system. Our experience with the SGI Cyclone team was one of technical competence and efficiency. In fact, we were so pleased with their service that we have returned to use Cyclone several times since our early July project.”

—Dan Long, Program Manager, Takata



“When our customer Takata approached us with an urgent need to quickly run hundreds of simulations under a very tight deadline, we urged them to get in touch with the Cyclone team at SGI,” said Marsha Victory, global sales administrator, at LSTC.

When Takata contacted SGI it was the Thursday before the 4th of July holiday weekend. They had hundreds of simulations that typically ran for four hours on four cores each. When asked when they needed to have their results back the date was Tuesday July 5th. In consultation with an SGI LS-DYNA applications expert it was concluded that by deploying a 512 core SGI® Altix® ICE integrated blade cluster the project could be completed in less than 48 hours. In order to expedite the process the customer uploaded their files into Cyclone and had the SGI LS-DYNA application engineer set up the batch scheduling and launch the jobs. Starting Friday night, the simulations ran for the next 31 hours and were made available for Takata to download back to their office on Monday July 4th, ahead of their deadline.

“From the moment we started talking with the SGI Cyclone team I felt confident that we were going to hit our deadline goal,” said Dan Long, program manager at Takata. “We were assigned a technical and account manager who walked us through the process, and who quickly got us a Statement of Work that outlined the pricing terms and service level agreement. We were asked which LS-DYNA version we currently used in-house so they could have the exact version ready to go on the

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SGI’s experience with Takata has brought home the fact that it takes more than just fast computers and storage to run a successful HPC cloud service. It also takes passionate and involved account management and deep technical application expertise to provide customers with the true value they are seeking. This has led the SGI team to understand that there is an even higher value service model that can be offered to LS-DYNA customers via Cyclone, and that is what we are calling Expertise as a Service (EaaS).

If you are looking for a quick and efficient computing environment to run your LS-DYNA simulations please give SGI a call or visit our “Ask a Sales Rep” area on SGI.com. SGI looks forward to the opportunity to work with you as a trusted partner.

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