



GEOIMAGE
Specialists in Satellite Imagery & Geospatial Solutions

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Mark Edwards
General Manager
Geoimage

Satellite image © 2017 DigitalGlobe

Geoimage deploys Fujitsu workstations, PRIMERGY server and ETERNUS storage to support a high-performance Graphics Processor system that can process terabytes of imagery.

At a glance

Country: Australia
Industry: Satellite imagery
Founded: 1988
Employees: 10
Website: www.geoimage.com.au

Challenge

Geoimage’s existing custom-built PCs were not capable of handling the new PCI Geomatics GeolMaging Accelerator software, which is vital to maintaining a competitive market advantage. It needed to find a new hardware platform that was up to the task.

Solution

Working with trusted IT partner, AfterDark Technology, the company deployed five FUJITSU Workstation CELSIUS devices, in tandem with a FUJITSU Server PRIMERGY CX400 and a FUJITSU Storage ETERNUS DX200 to provide flexible HPC processing power.

Benefit

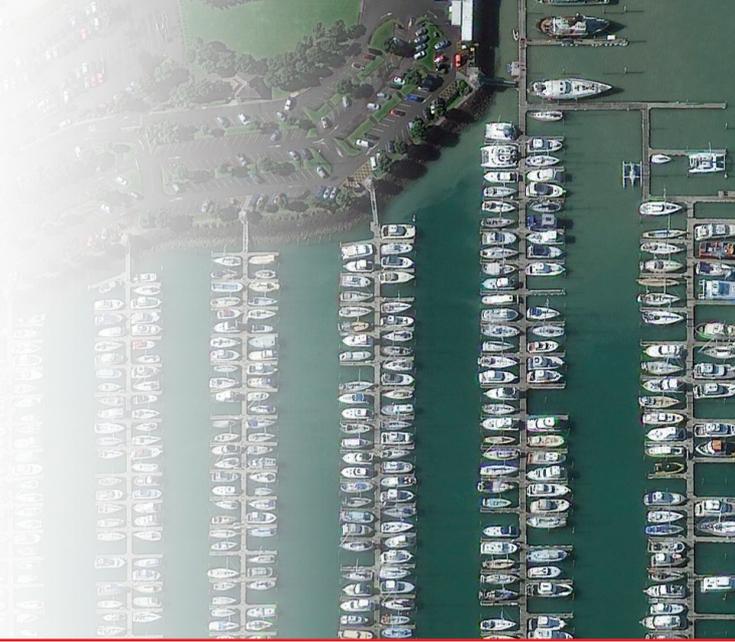
- Allows Geoimage’s processing specialists to spend more time focusing on producing better results for customers
- Opens a variety of new business opportunities
- Improves processing speeds, collaboration and remote access; enabling the company to work more flexibly around-the-clock
- Automated workflow and job management

Customer

Established in 1988, Geoimage is a leading independent specialist in satellite imagery and geospatial solutions. With decades of local, national and international experience working within the mining, engineering, oil and gas, agricultural, government and environmental industries, it has built trusted relationships with clients and partners based on insightful service and shared knowledge. The company is committed to translating innovation and new spatial technologies into solutions that deliver greater efficiencies, lower costs and improved outcomes.

Products and services

- FUJITSU Server PRIMERGY CX400
- FUJITSU Storage ETERNUS DX200
- FUJITSU Workstation CELSIUS



Satellite image © 2017 DigitalGlobe

Challenge

Mapping the Earth in fine detail using satellites and aerial sensors requires considerable processing power. Fujitsu hardware assists Geoimage's ability to provide true market leading advanced analytics of diverse spatial and non-spatial datasets.

"We are the 'dark room' of satellite imagery, taking the raw data and adding intelligible information as a solutions provider," explains Mark Edwards, General Manager, Geoimage. "In order to remain globally competitive, we need to improve service delivery, increase capability, be more efficient, lower costs and increase our profit margin."

Cloud computing, big data analytics, the Internet of Things, new subscription services and platform delivery options have combined with unstable global economies, as well as political and environmental influences, to create challenges and opportunities for the company.

Such challenges require a powerful computing platform; when Geoimage upgraded to the PCI Geomatics Geolmaging Accelerator (GXL), an automated, high performance, Graphics Processor system for processing many terabytes of imagery data, it needed to find a hardware platform that could handle the necessary computational load. This was because its existing fleet of ten custom-built PCs were no longer up to the task.

"As an analogy, we need to refine the crude oil before it is useable, and with earth observation that requires the ability to extract, analyse and organise data using tools such as change detection algorithms, which enable us to map positive and negative tree cover in Queensland, for example," adds Edwards. "We wanted to introduce a scalable, hyper-converged server combined with high-performance workstations to give us the requisite edge and sheer power."

Solution

Geoimage turned to long-time IT partner AfterDark Technology for advice; based on a successful previous deployment of back-office Fujitsu servers.

"We fully trust AfterDark Technology when it comes to hardware and we had a lot of confidence in Fujitsu from prior experience. Typically, we want best-in-class performance and that's what we saw when looking at Fujitsu workstations and HPC servers," continues Edwards. "We knew it would give us the mapping and processing capabilities required by the new software."

Geoimage initially purchased five FUJITSU Workstation CELSIUS machines connected to one FUJITSU Server PRIMERGY CX400 with NVIDIA K40 GPU for high performance graphics processing and one FUJITSU Storage ETERNUS DX200 device. Since then, an additional seven workstations have been ordered. These enable detailed manipulation of hi-res satellite imagery, as well as job management, automated workflow and progress reporting, improved processing speeds, work collaboration and remote access.

Benefit

The new Fujitsu hardware has enabled Geoimage to work more effectively, efficiently and flexibly around-the-clock. By untying the processing power from the desktop and hosting some of that demand server-side, it has boosted performance while also opening the door to near-limitless scalability.

"The Fujitsu platform delivers performance, reliability, manageability and usability all at an affordable cost," says Edwards. "At the same time, remote management and log-in gives us flexibility in how and where we work; making us much more agile and responsive."

This has allowed the company to confidently bid for contracts several orders of magnitude larger than previously possible, while at the same time keeping all the work in-house and maintaining all data security onsite. The new PCI GXL software has also enabled the company to package and produce a range of new services that have already gained the attention of global leaders such as Rio Tinto, BHP Billiton and Anglo American.

"Stakeholders have learnt that we can add value across operations. We have tested the boundaries of current technology capabilities and introduced ways to improve workflow, deliver efficiency and capture IP," comments Edwards. "We now have a HPC infrastructure that can handle high volume data; allowing us to handle regional or continental-scale projects and provide innovative solutions to solve complex business needs."

This implementation is the first step on a longer path that Geoimage expects will maintain its lead in the satellite imagery and earth observation sector. Fujitsu will continue to play a key role in this evolution.

"This initial investment has been a prototype for where we want to go next, which might entail moving from the server to the cloud. Either way, we will continue to build on our relationship with Fujitsu," concludes Edwards. "It enables us to adopt best-in-class components that create best-in-class solutions for our customers in their own journey towards digital transformation."

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