

Kalgoorlie Consolidated Gold Mines strikes it rich with reliable IBM[®] infrastructure

Overview

■ **Problem**

Kalgoorlie Consolidated Gold Mines (KCGM) was looking to replace its ageing server environment. The enterprise also sought a hardware supplier willing and able to provide exemplary technical support for its geographically remote operations.

■ **Solution**

KCGM engaged IBM[®] Business Partner Fujitsu to refresh its IT environment with IBM BladeCenter[®] blade servers, System x[®] servers and System Storage networked storage. Fujitsu used VMware virtualisation technology on top of the IBM BladeCenter architecture. The company duplicated this environment in another datacentre for disaster recovery.

■ **Benefits**

The IBM BladeCenter blade technology has given KCGM a more robust, stable, efficient and secure server environment. The new technology base is easier to manage and allows the mining company to deploy applications much faster. The combined virtualisation, blade server and disaster recovery capabilities have dramatically reduced system downtime.



About Kalgoorlie Consolidated Gold Mines

KCGM, a joint venture between Barrick Gold of Australia and Newmont Australia Limited, runs the largest open-pit goldmining operation in the country. It produces up to 850,000 ounces of gold each year, helping Australia maintain its position as the third-largest gold producer in the world behind South Africa and the United States. KCGM's main site is the Super Pit, located in the south-eastern corner of the city of Kalgoorlie-Boulder, about 600km east of Perth.

Creaky foundations

KCGM is one of Australia's largest goldmining enterprises. Its IT environment is used regularly by up to 500 staff, which supports a range of applications, including Oracle databases, email and proprietary goldmining software.

In early 2007, KCGM accelerated its plans to revamp this ageing IT environment. The company received further impetus to act quickly after an outage – caused by a fault in one of its storage systems – took a long time to rectify due to its geographical remoteness.

“Because we’re about an eight-hour drive from Perth, the nearest capital city, support services are effectively 24 hours away for any urgent problem we encounter,” said Shaun Fessey, Infrastructure Projects Coordinator at KCGM.

KCGM was looking for a hardware supplier that could provide a high standard of technical support and management competence. The company was also eager to make the most of the latest cost-saving and efficiency-generating IT technologies available in the market. In particular, it wanted to invest in virtualising its IT environment using VMware technology, which allows multiple business applications to run on a single server.

“We knew that we would have to substantially modernise our hardware, including our server and storage systems, if we wanted an IT environment that was more in tune with our business needs,” said Fessey.

KCGM asked its long-standing technology supplier and IBM Business Partner Fujitsu to carry out a review of its IT environment and operations. Fujitsu came back with a recommendation to install a range of IBM servers as the foundation for a robust and efficient virtualised IT infrastructure.

Freshening up with IBM BladeCenter

Fujitsu’s bid included IBM blade server and storage technologies, datacentre equipment from APC and VMware virtualisation software.

“We trusted Fujitsu’s understanding of our business, as well as its commitment to delivering the right kind of solution for us,” said Fessey.

After winning the bid, Fujitsu managed the project, while the KCGM team did most of the implementation. The first step was allowing the mining company’s IT staff to familiarise themselves with the new technology.

“Being in such a remote location, we wanted to keep as much technical knowledge in-house as possible to make us less dependent on people coming in from outside to sort out any problems,” said Fessey.

Fujitsu built a new technology infrastructure based on an IBM BladeCenter chassis and IBM HS21 Blade Servers and IBM System x servers. It used an IBM System Storage DS4700 storage systems and an IBM tape library to store and back up more than 3.5 terabytes of data. This infrastructure was duplicated at a secondary server site about 4km from the main datacentre.

“The entire new server and storage environment was installed within a few weeks,” said Greg Brindle, Business Development Manager at Fujitsu.

“The work was carried out to a high standard and with plenty of technical support.”

“I gave KCGM’s CIO a personal commitment that if he had any concerns at all about how things were progressing he could get me on the phone at any time,” explained Ken Lucas, Client Executive, IBM Australia. “And I have not heard from him at all.”

“The Fujitsu and IBM teams showed real dedication and frequently went beyond the call of duty,” said Fessey.

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– Ken Lucas, Chief Executive, IBM Australia.

Pristine Performance

KCGM's new virtualised IT environment has delivered a robust and efficient IT infrastructure.

"We've gone from about 17 servers to having almost everything running on three IBM blade servers," said Fessey. "This has improved application speed and performance and reduced the amount of time we spend on running the server environment day to day.

"The virtualisation technology also helps us reduce downtime due to server problems, because it separates the operating system from the hardware it runs on. If there's a problem with one server we can move seamlessly across to another one without having to stop production."

"KCGM now has much better disaster recovery capabilities," said Brindle. "If a server goes down on the primary site, they can immediately light up the corresponding server at the secondary site, which means there is a minimal outage."

"We get so much more security and peace of mind," explained Fessey.

"The redundancy aspect means our business processes are no longer as vulnerable to a computer failure. With two mirrored sites, it's highly unlikely for both to suffer the same disaster at the same time."

Consolidating KCGM's server environment using virtualisation and blade server technologies has boosted the technology support team's productivity and reduced overall IT maintenance costs. For one thing, the company can now use a single interface to manage its entire server and storage infrastructure.

"With the new environment, we can deploy a new application in about a day," said Fessey. "It used to take up to three weeks. What's more, we no longer have to go out and buy a new server every time a particular department needs something provisioned – we simply buy another IBM blade server and slide it in.

"The modular IBM BladeCenter set up makes this easy to manage. You just slot a new blade into the chassis and bring up the environment you want."

The IBM infrastructure has also contributed to a better and more cost-effective application development environment.

"Instead of having to provision quite a number of servers to test new applications on, we have a readily available development environment for testing," said Fessey.

The new architecture also provides considerable environmental benefits. The efficient IBM BladeCenter blade servers consume less of KCGM's power and require less of KCGM's energy for cooling, reducing carbon emissions.

"With the new environment, we can deploy a new application in about a day."

– Shaun Fessey, Infrastructure Projects Coordinator, KCGM.

For more information

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