

ARE YOU READY FOR A DISASTER?

LIM KIM HAI ELECTRIC COMPANY CASE STUDY: SURVIVING TWO MAJOR DISASTERS



When a Singapore-based manufacturer Lim Kim Hai Electric Co. (S) Pte Ltd. experienced a disaster on their IBM i platform back in 2015, it proved very costly. They had calculated their cost of downtime to be \$50,000 per hour. They began the search for IBM i HA/DR software and they were ready when the second disaster struck! – Here is their story.

Lim Kim Hai's Business IT Manager, Lynette Lim rang the Maxava office in Wellington, New Zealand at around 8am Singapore time, reporting they could not access nor bring up the production system. One of Maxava's IBM i systems engineers immediately asked her if the system control panel was showing any indication light and asked her to read out the System Resource Codes prompted. Lim was then informed that they were experiencing disk issues, which must be reported to IBM as soon as possible. Later that day, the IBM Singapore team went in and confirmed a disk failure. IBM told Lim it would take them a day or two to replace it so Lim Kim Hai had to do a failover to the target system immediately.

"Gartner reports that 70% of organizations that have gone down for 96 hours never recovered."

Lim Kim Hai Electric Company is one of the 11 subsidiaries of Tai Sin Electric Limited whose business areas range from manufacturing and distributing electrical materials to inspecting and certifying electrical safety of structures. The holding company and its 11 subsidiaries including Lim Kim Hai use their ERP system on the IBM i server that physically sits in their data center at the Lim Kim Hai building. One IT team supports all their IT requirements and infrastructure.

Sharon Lim, CIO of the company had been actively investigating high availability and disaster recovery solutions to protect their IBM i server from potential data loss and downtime since the company was first hit by a disaster in 2015.

"At that time, we were on a tape backup and we were aware of its limitations. Tape backup wasn't fast enough and we had to allocate time and resource to carry out a daily backup, which in turn limited the system availability. But the bigger issue was that there was a growing expectation from the business for much better Recovery Point

Objective and Recovery Time Objective," explains Lim.

The organization continued to expand the use of its ERP application residing on the IBM i platform as the business evolved to offer more complex products and services and better buying experiences to its customers. The risk of downtime and data-loss multiplied many times with the 11 subsidiaries all relying on the ERP application heavily day after day.

When a disaster took place with a tape backup system in place, the holding company Tai Sin Electric and its 11 subsidiaries including Lim Kim Hai experienced downtime. When the system was later restored to the previous night's backup, the company had already lost up to 3 hours' worth of data.

"We estimated that a day's data loss would amount to the financial loss of approximately \$1.4 million Singapore Dollars (over US\$1 million). Therefore, up to 3 hours' data loss meant over \$150,000 Singapore Dollars (about \$108,000 in US Dollars) worth of business loss," says Lynette Lim, Business IT Manager.

Luckily they had the paper trail of all their lost data which they re-keyed in, but had they not kept the paper trail, the potential loss of sales would have been far greater than \$150,000, considering the unaccounted, indirect consequences such as damages to the brand and reputation, loss of opportunities, loss of employees' time, etc.

"Disaster Recovery used to be considered a purely technical concern, but it is now clearly understood to be a financial responsibility."

The next challenge was to find the right high availability and disaster recovery solution for their IBM i system. Lim Kim Hai was one of the companies who chose the IBM i platform to run its core ERP application

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for its reliability, stability, superiority of performance and functionality, integrated systems, and many other benefits of this platform. However, when it comes to finding a software solutions vendor who has the capability to provide support when needed, they felt their search was not making much progress.

“We realized that not many suppliers could accommodate IBM i. There were some vendors that came to us to pitch, but they could not deliver any support on the IBM i platform even though they could sell a disaster recovery solution. Many were not familiar with the IBM i platform,” Lim recalls.

When Trillium Technologies, a Managed Services Provider based in Singapore recommended the Maxava HA suite to Lim Kim Hai, they also heard that DFS Venture Singapore, part of the DFS Group that is a Hong Kong based travel retailer of luxury products operating Duty Free Stores located in 17 major airports and 18 downtown Galleria stores, also replicates using the Maxava HA product.

“Our CIO set the HA budget and had it pre-approved as soon as we recovered from a disaster which took place in 2015, so we could move this forward as soon as we found the right product and the right vendor. The 10-plus-year relationship we had with Trillium Technologies also helped facilitate the process of making the right decision.”

During the Discovery Report process, it was found that Lim Kim Hai generates over 5 Gigabytes worth of data changes every day. According to the University of Berkeley, 1 Gigabyte of data is roughly equivalent to a pickup truck filled with books. That means Lim Kim Hai’s daily data turnover is over 5 pickup trucks filled with books!

A major goal for companies with little tolerance for downtime is to achieve a high level of business continuity. This helps ensure that their technology infrastructure including applications on their IBM i are always available no matter what the disaster circumstances. Having a fully tested recovery plan in place can increase your credibility as a reliable company that is able to meet service and support commitments following a disaster – giving you a competitive advantage.

Lim Kim Hai was still in the midst of the Maxava HA implementation and was on the phase of fine tuning the replication and working

through the audit process when they experienced a second disaster; a sudden hardware failure caused by a disk issue. The production server became unavailable.

This time all transactions were being replicated by Maxava and there was no data loss suffered. Maxava assisted Lim Kim Hai to failover to the target system.

“We were lucky that we had the real-time replication working as soon as the Maxava HA Suite was implemented, to prepare us for any disasters. Darius Cercado, Senior Solutions Consultant at Maxava was quick to guide us through when a disaster took place,” Lim continues.

“We appreciate the swift support from Maxava with the successful failover, and we recommend Maxava products and the Maxava team. The peace of mind provided by Maxava will allow our IT team to focus on managing the applications, and for the wider business, providing the best products and services to our customers and of course, running the business as usual.”

ABOUT MAXAVA

Maxava is a worldwide provider of innovative monitoring, high availability and disaster recovery solutions for IBM Power Systems. Maxava’s software and services are available from a global network of partners and are integral to the cloud offerings of leading Managed Service Providers and Cloud Service Providers. Customers have been using Maxava software and services for more than 16 years to ensure business continuity, reduce risk and meet regulatory requirements. Today, Maxava serves more than 500 customers in over 40 countries, providing 24x7x365 support directly through regional offices located in North America, Europe and Asia Pacific. Visit maxava.com for more information or find out what our customers have to say at [Maxava Customer Case Study Videos](#).