

## I D C   C A S E   S T U D Y

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# China Everbright Ensures Email Server Uptime with Windows Based Fault Tolerant Hardware Solution

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*China Everbright Limited, a financial services holding company, upgraded from Microsoft Exchange Server 5.5 to Microsoft Exchange Server 2003 Enterprise Edition. The new features and capability required a hardware platform upgrade. China Everbright wanted reliability and high availability. As a result, the company retired its old server and put in the NEC Express 5800/320Fa-LR Fault Tolerant Server Xeon 3.2Ghz running Microsoft Windows Server 2003 Enterprise Edition. This server's two Intel Xeon processors protect China Everbright from hardware failure downtime, as one processor will automatically activate if the other fails. China Everbright's mail server performs well on the NEC Fault Tolerant solution.*

### **Situation Overview**

China Everbright Limited (CEL) is a financial services holding company. Its primary business is in commercial banking, investment banking and brokerage, direct management and asset management in the Greater China region. It has interests in China Everbright Bank and China Everbright Securities Company Limited in Hong Kong. CEL also explores opportunities in mainland China with a view to establishing itself as a cross-border, diversified financial services group. For the six months to 30th June 2006, the group reported a net profit of HK\$410 million. Its net assets were HK\$5.41 billion. It has 140 employees.

Being a major financial company under the direct supervision of the State Council of the People's Republic of China, CEL's parent company — China Everbright Holdings Company Limited — has a solid financial background and sound reputation in both domestic and international markets.

### **The Challenge**

As is common with most modern corporations, email is a vital business application to China Everbright. The company relies on email for communicating with business partners, subsidiaries, and its parent company. China Everbright had been running Microsoft Exchange Server 5.5 as its mail server for several years. The company decided to upgrade its email server performance and chose Microsoft Exchange Server 2003 Enterprise Edition.

CEL considered running the new mail server on its existing hardware. However, the old hardware had reached its effective end-of-life, and the manufacturer had phased out the hardware and no longer offered support. CEL decided to optimize the transition and upgrade its hardware as well. The company looked to high availability platform options.

Said Mandy Tsai, the head of IT at CEL: "Time is of essence to an aggressive financial services company like us. Our mail server has become indispensable; many important documents and proposals are exchanged through our mail server and prompt delivery is expected. A single email might be make the difference between a deal being made or falling through. Downtime is intolerable."

## The Solution

China Everbright faced two options. One was to run Exchange on another vendor's cluster of two machines. The other was to run Exchange on the NEC Express 5800/320Fa-LR Fault Tolerant Xeon 3.2Ghz with two Intel Xeon 3.2Ghz processors running Microsoft Windows Server 2003 Enterprise Edition. Both options offered a failsafe option. With the cluster option, the failsafe involves having two machines to back each other. With the NEC Fault Tolerant server, only one machine is used; however, because there are two CPU modules, in the event of a failure in one CPU module, the other CPU module would immediately activate, delivering near zero server-downtime. In addition, the NEC solution also allows hot-swapping of hard disks in case of failure there as well.

China Everbright decided on the NEC Fault Tolerant server because it believed that:

- The set-up and administration on the NEC server was simpler; and
- The NEC solution was more cost-effective because the cluster solution required two machines and two licences to run. The NEC solution only needed one license.

## Future Plans

China Everbright tested the NEC Fault Tolerant server for four months before the final switch over in August 2006. The IT team checked the performance of Exchange on the server and its connection to its storage area network (SAN). CEL also tested the fault tolerance aspect of the server by swapping hard disks and taking out a CPU, all while the server was running.

The NEC server performed to CEL's satisfaction. The fault tolerance recovery worked as advertised for near zero server downtime when a hard disk was swapped. There were also no issues when the running processor was stopped. The back-up processor kicked in immediately. In addition, the server performed well running Exchange 2003.

The only issue that China Everbright encountered was a small driver problem; however, a phone call to NEC helped China Everbright resolve the problem quickly.

Since moving to the NEC Fault Tolerant server, China Everbright has not experienced any problems with running Exchange. The NEC server has proven to be a stable platform.

China Everbright is very pleased with the results and is considering implementing the NEC Fault Tolerant server for other applications. Said Tsai: "The NEC solution has impressed us and it will be our first choice when we are looking to run mission critical applications."

## Methodology

This case study was undertaken by IDC Asia/Pacific featuring a customer selected by NEC.

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