

Nanning city is the capital city of Guangxi province where is located in the central southern part of China. Nanning is gaining immense importance as a business and logistics hub where the ASEAN Expo is held every year since 2004. Dream Island Department Store Co., Ltd. is a leading large-scale retail store located in Nanning that has been continuously expanding their business. In recent years, the competition in this area has increased significantly because many companies regard this area as a strategically important market. In order to enhance their competitiveness, improve customer satisfaction and maintain their advantages, Dream Island Department Store deployed NEC's high availability software "ExpressCluster" to ensure stable operation of their POS system.

Improved efficiency and service quality with high availability POS system



Fan Jingzhao
IT Division Manager,
Dream Island Department Store.

System downtime is detrimental to business competitiveness and customer service

The market entry by industry giants like PPR, Guanzhou Friendship Group and Wal-Mart makes the market competition more fierce than ever. To survive in this hyper-competitive environment, operational competitiveness enhancement, increased customer engagement, and high quality services were essential for Dream Island Department Store.

The negative impact from system downtime is critical. "The servers for cash register were frequently down due to heavy load and consequently the cash registers in the stores couldn't be used." Mr. Fan Jingzhao, IT Division Manager of Dream Island Department Store explains the situation in the past. He continues, "Each server failure used to take more than three hours to recover, resulting in huge losses to the tune of 1M RM loss per hour." The IT Division has been looking for the best way to enhance their IT system for customer satisfaction improvement.

The POS server systems are the foundation of business continuity for Dream Island Department Store. If the servers are down, the sales activities in the stores were disrupted with obvious negative impact on their business. The IT Division found that

their POS systems gradually became large and complicated as their business expanded. They started internal strategic discussion to make their POS systems highly reliable and available.

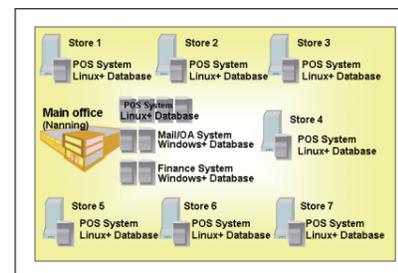
They had three criteria to assess the candidate software such as realize business system continuity for cash register operations in each store, shorten the data transmission time between main store and branch stores, and operate and manage systems at low cost.

They evaluated several software applications and finally decided to select NEC's high availability software "ExpressCluster".

Mr. Fan recalls, "We evaluated several applications and made our final decision to deploy ExpressCluster because the product is excellent in quality and operability. We also appreciated NEC's customer support. The engineers of NEC Advanced Software Technology (Beijing) Co., Ltd supported us to perform the evaluation until midnight and we felt comfortable with their support correspondences."

Ensure POS system stability with NEC High Availability Software

Dream Island Department Store installed server systems for POS, Mail and Finance in the headquarter office located in Nanning and these servers collected the sales POS data from the branch stores. Since the POS systems in the branch stores were separately operated from the POS systems in the headquarter office, there were no network engineers assigned to the branch offices. The engineers in the headquarter office remotely supported the branch store systems. Before the deployment of ExpressCluster, when any problems or failures were detected in the branch offices business, operations were disrupted in order to fix failed systems.

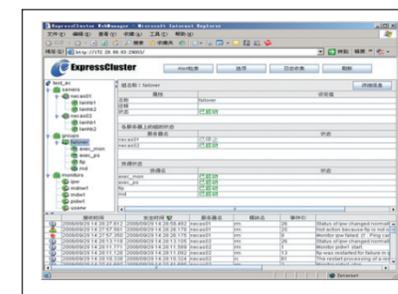


The POS system configuration before ExpressCluster deployment.

The systems in the branch offices were separately operated from the headquarter office. Linux and Windows as OS, and POS and database applications were installed.

ExpressCluster supports both mirroring type cluster and shared disk type cluster to meet specific needs of the customer environment.

With the deployment of ExpressCluster, both mirroring type cluster and shared disk cluster configurations were set up on the servers in the headquarter office as well as



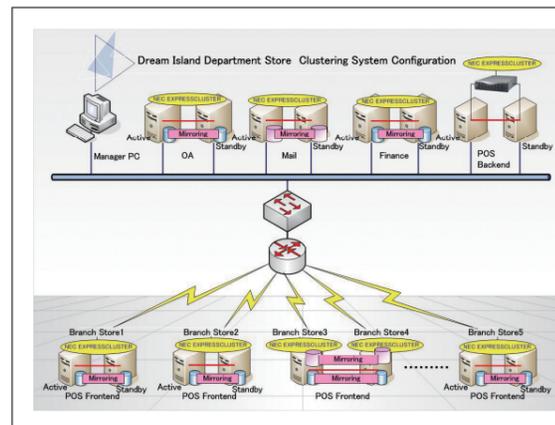
Dream Island Department Store enhanced their IT system robustness with ExpressCluster.

in the branch offices. The application servers in the headquarter office achieved high availability with mirroring type cluster for mail, operation and finance, and database. On the other hand, shared disk type cluster was adopted for back-end server in POS system in the headquarter office to ensure database availability. Furthermore, mirroring type cluster was set up to front-end servers in POS system in the branch offices.

The updated POS systems can quickly failover the data from the active server to standby server, when failures are detected. The POS systems now run 24 hours per day and 365 days per year.

In addition, old servers were re-used as standby servers for the POS systems in the headquarter office. New server machines were only required in the branch offices. Thus the total cost of the solution was minimized.

Through the deployment of ExpressCluster, the IT Division of Dream Island Department Store successfully achieved high availability of critical database systems, ensured the stability of their key application systems and reduced Total Cost of Ownership (TCO) at once.



The POS system configuration after ExpressCluster deployment.

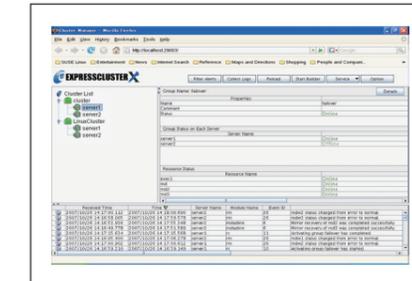
Mirroring type cluster for application servers in the headquarter office and POS system servers in the branch offices, and shared disk type cluster for POS system servers in the headquarter office.

Confidence in NEC

The POS system of Dream Island Department Store was greatly revitalized and strengthened with ExpressCluster to withstand the peak workloads during special promotional campaigns.

"Our POS system has been stable since ExpressCluster installation. For example, a failure of database in the POS system occurred on the day of the 2nd anniversary of one of our stores in October, 2008. However, with ExpressCluster, we could failover the system to the standby server within 2 minutes, continue our operations and prevent huge business loss." Mr. Fan recalls the events on the day.

"Deployment of NEC's high availability software ExpressCluster in our company was extremely successful." Mr. Fan appreciates the advantages of ExpressCluster and NEC and he plans to consider other NEC products in the near future.



Product Introduction

High Availability Middleware ExpressCluster

NEC's middleware and realize business continuity. It covers failure detection, failover function, integrated management function and disaster recovery function. It is sold under the brand CLUSTERPRO in Japan.



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Representatives : Chairman Liu Lining
General Manager Zhong Qun

Domain : Large-scale retail store
URL : <http://www.mzdol.com>

Founded in 1995. It consists of eight department stores in Guangxi province with more than 10,000 employees and successfully achieved 7 billion Chinese yuan in total for the recent 13 years.

