

Case Study

Shanghai Shuguang Hospital

» The database system at Shuguang Hospital is based on a powerful system that is highly trustable for our business growth«

Ming, Liu, Director of Information Center, Shanghai Shuguang Hospital



The customer

Country: the People's Republic of China
Industry: Healthcare
Founded: 1906
Employees: >1800
Website:
http://www.sggy.cn/eng/sgeweb_history.html



The challenge

With increasing operational development, the previous IT equipment could no longer match the hospital's requirements. This created a demand for multi-platform consolidation with uniform management.

The solution

A Fujitsu infrastructure solution based on PRIMEQUEST 1800E and ETERNUS DX440 data storage best matched the customer's demands for uniform management in a multi-platform environment. Further the electrical isolation of the internal server hardware partitions would protect the core of their mission critical applications from hardware and software failures. The high performance and scalability would also help in accommodating future business growth.

The customer

Awarded many times by the Shanghai City and Chinese governments, Shanghai Shuguang Hospital is one of the highest ranked hospitals in China. As an affiliated hospital of the Shanghai University of Traditional Chinese Medicine (T.C.M) with over 100 years of rich experience in T.C.M, it provides both Western and Traditional Chinese medical services at the same time. ISO9000 certified it also qualified as one of the hospitals serving the Shanghai World Expo in 2010. The hospital is divided into 2 parts with a total of 1320 open ward beds. The western branch, which covers over 50,766 square meters, is in the original campus located near Huaihai Park in the center of Shanghai, while the eastern branch is located in the Pudong New Area. Covering 83,000 square meters. It is a garden hospital and integrates modern buildings and traditional features. The hospital invested 600 million RMB (around USD 9 million) on the development of their new East campus.

The challenge

With the rapid growth in Shuguang Hospital's business, data from its various business operations also increased dramatically making system performance degrade more and more. The hospital needed to tackle the problem of ever expanding server silos. However, based on fault tolerance servers, the existing HIS database systems provided excellent reliability but limited capability and scalability, and the conventional server architecture required many servers for different applications. This increased purchase costs, administration and maintenance, plus the hidden costs of management complexity. This in turn began to demand too much time and energy from support staff. The hospital was encouraged to build a new HIS database system using multi-platform infrastructure and uniform management. The implementation of a redundant platform with larger and more reliable data storage, faster access speeds, and high scalability, became their new goal.

The solution

As the hospital used SQL server, Fujitsu proposed a mission critical infrastructure solution based on PRIMEQUEST 1800E and ETERNUS DX440 to best match the customer's demands. Considering the large capability, high reliability and hardware partitioning functions, the hospital started to work in conjunction with the Fujitsu pre-sales team to work out how to make full use of this infrastructure and setup a consolidation solution.

The benefits

- Improve the hospital's performance.
- Excellent scalability to meet the requirements of continuous business growth
- Ideal data protection functions to ensure information security
- Flexible system configuration and that scalability to protects the hospital's investments

Using dual hardware partitions, the clustered database would be capable of full redundancy, while core applications would operate on the two remaining hardware partitions. The electrical isolation of the hardware partitions would also protect from hardware and software failures, while the high scalability would enable future business growth. Finally with higher RAS features PRIMEQUEST 1800E would provide a total system with longer uptime and lower costs. In addition the use of Fujitsu mid-range storage, ETERNUS DX440, would provide shared storage for the PRIMEQUEST1800E database server and better ensure data integrity. It would also store all the relevant settings and data for the applications on the other two hardware partitions.

The benefits

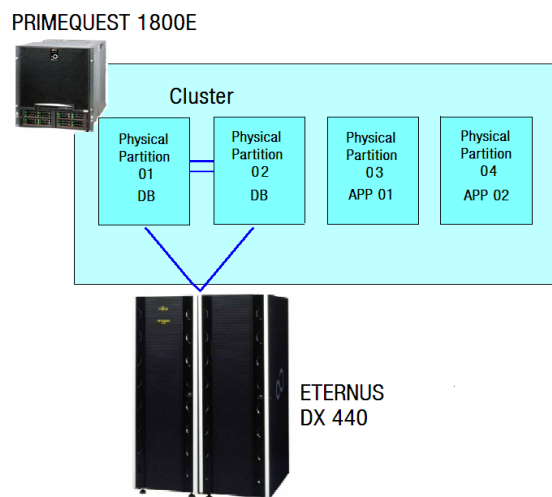
PRIMEQUEST1800E is configurable up to 8 processors provides as many as 64 cores. This met the hospital's requirements for performance to the largest extent. This high scalability and the design for system integration with the arrangement of four independent hardware partitions (acting like independent servers) in the same machine, also brought the best in integration characteristics into play. While meeting the scalable performance required the platform solution also ensured system performance and reliability. After deploying the Fujitsu PRIMEQUEST 1800E servers, the hospital obtained operational advantages from the centralized load management, including:

- Scalability: to meet the increasing application and data base requirements.
- Uniform management: Existing Windows and Linux IT skills were better able to support enterprise applications.
- Centralized management: Administrators could use the central monitoring function built into the server, to perform consolidated management of all the mission-critical workloads.
- Cost reductions: A reduction in servers running similar workloads decreased repetitious maintenance tasks.
- Energy savings: The system enabled power consumption to be raised or lowered in line with operating workloads. This reduced power consumption during non-peak periods, yet provided the right performance when asked to do so or when computing densities increased. Settings are adjustable, daily, monthly or quarterly.

The latest ETERNUS DX storage system also ensured lower power consumption, easier management capability and higher redundancy. Its extremely high reliability and pre-installed graphically based management software also allowed operation without specialized training. The ETERNUS SF software further simplified management and maintenance of the overall storage system, providing centralized SAN/DAS/NAS storage resource control and improved management efficiency.

Products and services

- Fujitsu PRIMEQUEST1800E as the core database server.
- Fujitsu ETERNUS DX440 scalable storage
- Fujitsu ETERNUS SF management software



Conclusion

Overall the specifically designed solution of PRIMEQUEST 1800E with ETERNUS DX440 storage met the demands for high efficiency and provided Shuguang Hospital with scalability, availability, data mobility and security.

Fujitsu's unique PRIMEQUEST1800E server product stood out from the crowd in the project. The hospital was impressed by Fujitsu's rich development and deployment experience. They appreciated Fujitsu's ability to integrate RAS characteristics into the hardware design and management software to control workloads running on the system - as well as the mature server design philosophy and principles. With its redundant structure PRIMEQUEST 1800E also removed any single-point of failure and the fast workload restart capability adapted well to the hospital's IT requirements. In providing flexibility to meet future growth and application diversity, PRIMEQUEST's reliability was comparable to the fault tolerant servers but with better capability. As the old saying goes "You can't have your cake and eat it too." But this time Fujitsu successfully complete the mission impossible, and help the customer "have the cake and eat it"!!

About Fujitsu

Fujitsu is a leading provider of ICT-based business solutions for the global marketplace. With approximately 170,000 employees supporting customers in 70 countries, Fujitsu combines a worldwide corps of systems and services experts with highly reliable computing and communications products and advanced microelectronics to deliver added value to customers. Headquartered in Tokyo, Fujitsu Limited (TSE:6702) reported consolidated revenues of 4.6 trillion yen (US\$50 billion) for the fiscal year ended March 31, 2010.

Contact

FUJITSU LIMITED
Website: www.fujitsu.com
2011-04-21 WW-EN

© Copyright 2011 Fujitsu Limited. Fujitsu, the Fujitsu logo are trademarks or registered trademarks of Fujitsu Limited in Japan and other countries. Other company, product and service names may be trademarks or registered trademarks of their respective owners.

Technical data subject to modification and delivery subject to availability. Any liability that the data and illustrations are complete, actual or correct is excluded. Designations may be trademarks and/or copyrights of the respective manufacturer, the use of which by third parties for their own purposes may