Construction equipment rental business is optimized by new mission critical system running on PRIMEPOWER servers and ETERNUS storage

[This is a translated article from a success story posted in Japan.]

Solution	• Sales management, inventory management and accounting system
Industry	• Construction equipment rental, information products rental, steel sales
Hardware	• PRIMEPOWER850, 650, 200, ETERNUS3000
Software	• SafeCLUSTER(*), Interstage, Systemwalker, Oracle9i Database

*SafeCLUSTER is the previous name of PRIMECLUSTER, and is only used in Japan.

Problems and effects

New mission critical system needed to meet new business requirements
Construction of new open mission critical system with a Web-based interface to meet business requirements

Need for reliability equivalent to mainframe systems
Fujitsu's middleware (SafeCLUSTER and Interstage) support high reliability systems

Need to more easily adapt to change
New functions and performance are well balanced to needs. More easily managed and changed Java applets are used for data update operations, while servlets are used for data referencing operations.

With mission critical systems requiring high reliability and high availability, the Fujitsu platforms were the best choice due to Fujitsu's rich experience in system integration from small to large scale systems

With the market environment rapidly changing, nowadays the key issue is how to optimize an entire system. In developing its construction equipment rental business, Kanamoto decided on a re-construction of its entire mission critical system. The objective was to establish a new IT infrastructure that could be utilized quickly and seamlessly for a variety of business data functions. Fujitsu's family of products now supports this new system, called SHAZZAN.

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Business Overview

Kanamoto continues to grow as the leading company in construction equipment rentals

Although its first business was the sale of steel products and materials, Kanamoto saw a new business opportunity when it launched its construction equipment rental business. The rental market for construction equipment was small at first, but Kanamoto's excellent product lineup and service ensured business grew rapidly. In 1991, Kanamoto listed its stock on the Sapporo Stock Exchange, and in 1996 listed its shares on the Second Section of the Tokyo Stock Exchange. Within two years, its shares were elevated to the TSE's First Section, and construction equipment rentals had become Kanamoto's biggest business. Kanamoto offers over ten thousand of the latest construction equipment items, with a total acquisition value of approximately 80 billion yen, and repair specialists deployed across all its branches. Kanamoto's size enables customers to choose the optimal equipment for their needs. Kanamoto also is well known in markets outside Japan for its high quality and sure maintenance. As the front-runner in this industry, Kanamoto also actively promotes Investor Relations (IR) activities, and in 2003 won the IR Excellent Company award from the Japan Association for Individual Investors.

[Mr. Yuichi Takayama, Manager of the Public Relations Section at Kanamoto]

Since the mid-1970s, Kanamoto has continued to expand the computerization of its operations. In 1985 it constructed an online system well ahead of its competitors. Mr. Yuichi Takayama, Manager of Kanamoto's Public Relations Section, talks about the system's importance. "Success in the construction equipment rental business depends on how you improve your products' utilization. Detailed control over claims, repair itineraries and costs are mandatory in decisions on machine acquisition and demand prediction. It can't be done without online-systems."

Kanamoto's systems have evolved in line with Fujitsu's systems development, including Fujitsu M130F, M770 and GS8400 mainframes. In January 2004, Kanamoto replaced its mainframe with an open system.

Key points of system introduction

Kanamoto's mission critical system was reconstructed for complete business optimization

[Mr. Hiroshi Kumagai. Executive Officer and Director of Information Systems at Kanamoto]

Companies with large assets tend to hesitate at reconstruction of mission critical systems. Mr. Hiroshi Kumagai, Executive Officer and Director of Information Systems, talks about the process of systems reconstruction. "Previously, an improvement in the utility of a specific business was the main purpose for system reconstruction. But now, the issue is how to optimize the entire business. Our mission critical mainframe system had a constraint that limited screen size to 84 columns by 20 lines. This made it difficult for further enhancements to business requirements. So to establish a new business basis, we had to free the replacement system from the legacy system."

Kanamoto selected Fujitsu products, including PRIMEPOWER UNIX servers and ETERNUS high performance storage systems, as the platforms for the new mission critical system. "The most important point in mission critical systems is the assurance of reliability and availability. In this regard, Fujitsu has rich experience from many systems integration projects both small and large. Fujitsu's own in-house development of hardware and software products has been supporting our system reliably over the long-term. So we concluded that Fujitsu was the best choice." (Mr. Kumagai)

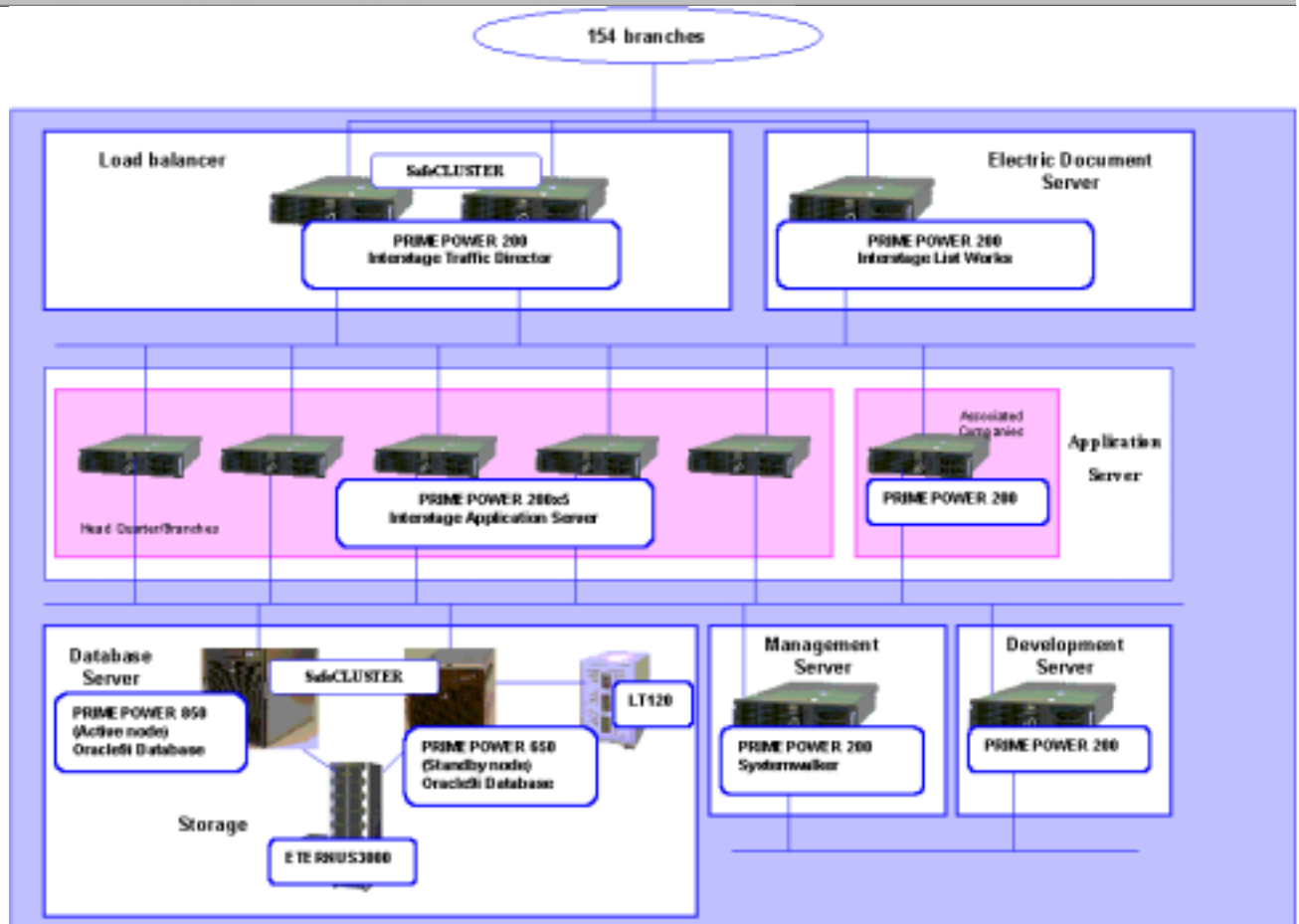Kanamoto's most recent systems integration was conducted by Fujitsu and the system integrator HID.

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System Overview

A PRIMEPOWER based environment was used to achieved high reliability and high availability

PRIMEPOWER850 and 650 were installed as database servers with SafeCLUSTER used to construct the cluster system for highest possible reliability and availability. The PRIMEPOWER650 also provided the backup functions to maximize IT resource utilization. PRIMEPOWER200 servers were also deployed. There are 5 PRIMEPOWER200s as application servers, 2 as load balancers, one as a digital document server and one for development. All hardware in the systems runs UNIX.

Mr. Kumagai talks about this rich environment. "We were familiar with UNIX because we provide UNIX workstations as part of our computer rental business. We also knew of the reliability of Solaris OS. An Interstage Application Server is used for the Web application server, while Java applets are used for data updating and servlets and Oracle PL/SQL are used for data referencing. Although it was our first experience with constructing Java-based systems, we improved our applications productivity by using Interstage Apworks." For batch application migration from the mainframe system, NetCOBOL played a significant role in the smoothness of the migration.

Mr. Kumagai also notes, "ETERNUS3000 storage greatly improved the efficiency of our batch procedures. In our former system, overnight batch procedures took more than three hours. Currently this finishes immediately due to the new ETERNUS One Point Copy (OPC) function. Even though a RDBMS had failed just before system commencement, we were able to recover immediately owing to this OPC function."

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System architecture diagram showing 154 branches connected to Load balancer (PRIME POWER 200 Interstage Traffic Director with SafeCLUSTER), Electric Document Server (PRIME POWER 200 Interstage List Works), Application Server (PRIME POWER 200x5 Interstage Application Server, Head Quarter/Branches; PRIME POWER 200 for Associated Companies), Database Server (PRIME POWER 850 Active node Oracle9i Database, PRIME POWER 650 Standby node Oracle9i Database with SafeCLUSTER, LT120, Storage ETERNUS3000), Management Server (PRIME POWER 200 Systemwalker), and Development Server (PRIME POWER 200).

Future perspectives

The new mission critical system based on PRIMEPOWER and ETERNUS hardware has established the basis for next-generation businesses. Mr. Kumagai talks about further utilization of the new system. "The new system has no problems with reliability and availability. Moreover, we can better optimize applications on this open platform. For instance, freeing ourselves from the previous screen size limitations gives us choices in new IT infrastructure enhancement. We can also make use of additional data by linkages to other systems. We will be prepared to make use of new technologies as they come up in the future. We also know and expect Fujitsu will support us." Mr. Kumagai also touches on the origin of the system name, SHAZZAN. "It is not an acronym. We borrowed the name from a character in a children's cartoon, a genie who could do virtually anything." Fujitsu's solutions will continue to assure and support Kanamoto's growing businesses.

[Kanamoto provides various construction equipment]

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Profile

Name: Kanamoto Co., Ltd.
Location: 1-19, Odori Higashi 3-chome, Chuo-ku, Sapporo 060-0041
Incorporated: October 28, 1964
Capital: 8,596,730,000 yen
Sales: 60,494,000,000 yen (Fiscal year ended October 2003)
Number of branches: 139
Number of employees: 1,110
Businesses

Known as a pioneering company in the construction equipment rental business, Kanamoto provides a full lineup of rental products. Its product management system and sure product maintenance are the reasons so many customers use Kanamoto. Kanamoto also has a range of other businesses, including steel product sales and information processing equipment rental.

URL

http://www.kanamoto.co.jp/en/main_e.html

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