FUJITSU

CASE STUDY
ICHIBANYA

»THIS TIME I REALLY ENJOYED MYSELF GETTING THE APPROVAL BECAUSE I KNEW THE PLANNED NEW SYSTEM COULD HELP REDUCE TCO BY ABOUT A MILLION DOLLARS«

Hiroshi Mizuno, Director, Information System Department, Ichibanya Company Limited

CC: riNux

THE CUSTOMER

Country: Japan
Industry: Food
Founded: 1982
Number of restaurants: 1,222
Website: www.ichibanya.co.jp

CURRY HOUSE CoCo 壱番屋

THE CHALLENGE

Ichibanya was in need to renew the company's 5-year old aging servers without reconfiguring the database system. Since the number of the servers increased during the span of five years, they needed to cut management costs. They needed a total solution that optimize the server running costs and improve resource utilization and reduce server management costs

THE SOLUTION

Although the customer knew they would need to consolidate the servers, they were not confident enough to go through with it without a live demonstration. Fujitsu eased the customer's concern by conducting a demonstration of server consolidation using VMware. The demonstration by Fujitsu gave the customer confidence to go through with the process.

THE CUSTOMER

Based in Nishibiwajima-cho a suburb of Nagoya, Ichibanya launched its first specialty quick-service curry restaurant in 1978. Since then the company has steadily grown under its proven "Curry House CoCo Ichibanya" brand name. Listed on the Tokyo and Nagoya Stock Exchanges, Ichibanya currently operates 1,139 franchise-based curry restaurants throughout Japan, China, Taiwan and Hawaii (as of December 2007). In the fast-food industry, where competition is fierce, the large Ichibanya chain continues to grow using its unique franchise strategy called the "Bloom System," to train franchisees. Unlike normal franchise systems, Ichibanya only lets its own employees run the curry restaurants, rather than publicly recruiting franchisees. So individuals who wish to take up a franchise are required to enter the company first, learn all necessary knowledge about operation of a CoCo Curry House restaurant, and then be certified as an independent owner. This is how Ichibanya has expanded its franchise chain; with the successful system ensuring the quality of its curry restaurants remains very consistent.

THE CHALLENGE

In the summer of 2006, IT systems at Ichibanya were facing major setbacks. After 5-years of use, 14 of the company's servers were aging and failure rates were increasing. In addition the maintenance contract for the 14 servers was about to expire (in October 2006), and nobody could guarantee proper operation of the system after the contracted period. The database server, in particular, was a problem. It seemed likely that Ichibanya would have to reconfigure its database system to allow replacement of the server with a new operating system. This was despite the database server not needing a functionally upgrade. What made the situation more difficult was that in order to avoid processing conflicts between servers, Ichibanya had kept purchasing new boxes every time they needed to implement new systems. As a result, given the increasing numbers of servers, Ichibanya were struggled with excessive server management costs.

"We analyzed and examined the operational status of our servers, and the analysis revealed our IT resources were underutilized with unbalanced workloads on each server. We had some 50 servers, some of which were being used only at nighttime, while other servers were only being used during the day. Server usage was really inefficient," says Hiroshi Mizuno, Director of Information System Department, Ichibanya Company Limited. "We needed a technology solution that could help reduce maintenance costs and achieve resource optimization."

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THE BENEFIT

- Sever replacement completed without having to reconfigure the previous system.
- Over 50% reductions in TCO.
- Ensured availability provided by VMware HA.
- Implemented a backup environment in an affordable manner.
- Improved reliability by creation of a server testing environment prior to actual cutover.
- Minimized impact on users with zero operational downtime

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PRODUCTS AND SERVICES

- Fujitsu PRIMERGY RX300 S3 rack-mount servers
- Fujitsu ETERNUS 4000 model 80 storage system
- Fujitsu ETERNUS SN200 model 120 FC switches
- Fujitsu ETERNUS LT220 tape library
- VMware Infrastructure 3 Enterprise Edition
- VMware VirtualCenter Management Server

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THE SOLUTION

In spring 2006 Ichibanya first implemented VMware virtualization software when their accounting department needed a server for the cost accounting system. Akinao Watanabe, Manager of HQs Systems Division, Information System Department at Ichibanya, clearly remembers his first impressions of VMware. "We tested the virtualization software in various ways, including batch processing, backup and restore, and I was convinced that the virtual machine solution would provide outstanding value to our system," Watanabe explains.

Based on that experience, Ichibanya started fully considering server consolidation by virtualization to replace its 14 servers. However, the IT professionals at Ichibanya were not 100% sure whether live-migration could be performed properly until they saw an actual product demonstration. "The product demonstration showed an easy-to-perform on-line migration of a running application from one physical machine to another. It was obvious that the virtualization solution would provide significant benefits; a reduction in maintenance costs; redundancy; and much improved reliability," states Mizuno.

Ichibanya finally reached a decision that the company would consolidate its aging 14 servers and reduce the number of physical machines to three. Using VMware virtualization technology to revamp the IT infrastructure, they expected to achieve the following four benefits:

- Significant hardware cost reductions.
The ability to deploy several virtual servers on a single physical machine would support future growth while reducing the need to purchase additional boxes. As long as memory and HDD capacity permitted, Ichibanya will also be able to add additional virtual servers, on the three physical servers (two running VMware and one a management server). This would also significantly reducing the time and costs required for hardware maintenance.

- The highest levels of availability with a redundant configuration.
Even if one server failed, workloads on the failed server could be immediately moved to another server, minimizing costly downtime.

- Create a backup environment.
The new consolidated servers would have the ability to work as an alternative machine for the remaining 40 servers at Ichibanya that were not consolidated. This would provide a cost-effective backup environment.

- Utilization of legacy software assets.
The database applications Ichibanya previously hosted on Windows NT could be migrated to the new virtual environment, with no extra time and costs required for reconfiguring the database system.

"Deploying a new system usually requires a huge amount of money, so it is quite painful to ask for management approval. This time, on the other hand, I really enjoyed myself getting the approval because I knew the planned new system could help reduce TCO by about a million dollars," Mizuno says.

When Ichibanya chose to revamp its IT system, the company compared four vendors that could offer both hardware and virtualization solutions and turned to Fujitsu. Watanabe explains, "We found that performance of Fujitsu hardware products was excellent and we could greatly benefit from Fujitsu's support desk services. As only Mr. Mizuno and I are the main people in charge of developing the company's internal systems, we previously encountered numerous setbacks when needing to implement a new system, due to a lack of sufficient background. Now with support from Fujitsu's support desk, we can obtain a wide variety of information that helps us go ahead with the development. What we really appreciated was that salespeople at Fujitsu were very quick to respond to us and they tried to fully understand and best meet our system requirements. As a result, Ichibanya now has a new system with a most optimized configuration," continues Watanabe.

In physical machine environment, replacing 14 servers usually takes six months to one year. Cutover at Ichibanya, on the other hand, was successfully completed on less than a month. Use of a VMware Converter migration tool made it possible for Ichibanya to start operating the new virtual servers by the end of 2006. For the new system, Ichibanya adopted Fujitsu 2U rack-mount servers along with a SAN-connected Fujitsu ETERNUS 4000 model 80 storage device, and Fujitsu ETERNUS SN200 model 120 FC switches. The switches were used to connect the servers to the storage device (See figure below). Out of three physical servers, two Fujitsu PRIMERGY RX300 rack-mount servers are running VMware ESX Server 3.0. With VMware HA functionality, if one server fails, the virtual servers on the failed server can be automatically moved and re-booted on the other server. The third server, without VMware ESX server 3.0, operates both as a management server and a backup server. Being connected with the Fujitsu ETERNUS LT220 tape library device, the server provides a backup environment as well as managing the virtual environment using the VMware VirtualCenter monitoring tool. Fujitsu ETERNUS 4000 model 80 can hold up to 15 disk drives. In consideration of performance, the new system has three RAID groups, one for the guest operating system and two for data space.

THE BENEFIT

Since operation of the new system commenced, Ichibanya has successfully achieved its initial objectives, including a reduction in TCO of over 50%. The company has also significantly benefited from the zero-downtime stable operation provided by VMotion. "We previously had to send a notification to more than 1,500 users, including headquarters' employees and our franchisees prior to a scheduled system down. With the new system, that kind of procedure is no longer required. Implementing VMware significantly simplified system operations," states Mizuno. Ichibanya also greatly benefits from the new system's ability to quickly and easily deploy a server for testing, which can help improve system reliability. "As we can perfectly set up a VLAN on network, we will be able to copy and run a production application on the virtual network using the clone function in VMware. The new system enables us to test a wide variety of applications. Setting up the testing environment itself used to be a big project, both time-consuming and difficult. For example, we used to perform a version update and let the updated system go into production without testing, assuming the updated system would work properly. Now with the new system, instead of taking such a risk, we can test the new application and verify proper operation before moving the new application into production," explains Watanabe.

CONCLUSION

Based on the know-how and experiences acquired during this consolidation, Ichibanya is now planning to consolidate its remaining 40 or so servers, using a virtualization solution to reduce the number of physical servers and server management costs. "To improve our system, Ichibanya will continue to look for VMware-initiated technology solutions, so we would like to ask application developers' to continue their efforts with the technology." Mr. Mizuno shows his expectations. "I think it's really important to let developers learn more about the significant benefits of VMware," Mizuno concluded.