Case study
The Legislative Yuan of the Republic of China

"By fully understanding the requirements of customers, Fujitsu Taiwan built a standardized, virtualized and automated cloud."
Mr. Chen, Director, Information Technology Department, Legislative Yuan

The customer

Country: Taiwan, Republic of China
Industry: Government
Founded: 1928
Employees: 2,500
Website: www.ly.gov.tw

The challenge

With the mass deployment of Intel X86 servers, the footprint and power consumption in the Legislative Yuan's data center was increasing fast. There were also issues with IT administration as a result of the growth. To save space and energy and create a smaller carbon footprint, the Legislative Yuan decided was looking to a more consolidated approach, such as cloud computing, to achieve a more effective and efficient system.

The solution

Fujitsu Taiwan proposed the IaaS private cloud computing environment, based on PRIMERGY BX900 blade servers with ServerView RCVE and ROR cloud software products for orchestration, abstraction and availability of IT resource. The new solution would provide flexible and efficient IT management and a significantly reduced footprint and once deployed would make it easy to move to full IaaS Cloud operation when and if required.

The customer

The Legislative Yuan is the parliament of Taiwan (Republic of China). The legislators are elected every four years and the next legislator election will be held on the same date as the next presidential election in 2012. It is served by a corps of some 2,500 employees, who are responsible for its operation, including meetings and discussions on public projects and proposals of national importance. It had become apparent that to provide better service to the legislators and the public the computer systems would need to be upgraded. But as a focus of public attention it would demonstrably need to save money and follow the government's own green policy to "Save energy and reduce the carbon footprint".

The challenge

Previously in 2008, the mainframe computer systems in the Taipei City data center had been moved to the datacenter in Taichung City. This was followed by the set up of a virtual tape library (VTL) in Taichung and another at the remote backup center in Xindian This would better utilize existing equipment and provide comprehensive backup and archive mechanisms. But at the same time, it became more difficult to manage the 100+ Intel x86 servers now in operation. A simpler and more flexible IT infrastructure was required that would meet the new Green and low cost requirements and manage the system more efficiently.

The solution

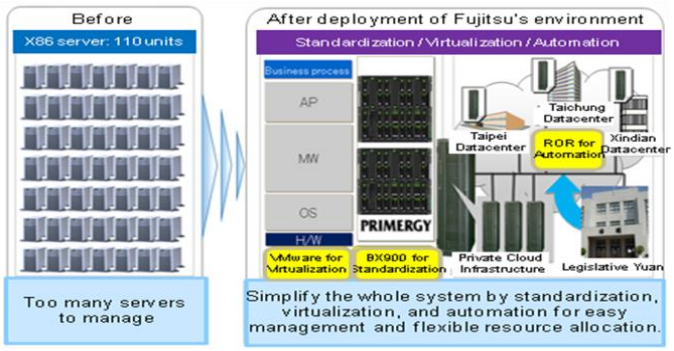
Fujitsu Taiwan proposed a move to a Private IaaS cloud environment based on PRIMERGY BX900 Blade servers, and ServerView automatic resource integration and management software and VMware. This would shrink the number of servers, better utilize system resources, save datacenter space and power consumption and ensure the maximum Green IT benefits were met. Fujitsu Taiwan promoted their cloud computing approach in a series of seminars, which introduced cloud computing related products, know-how, and successful case studies in Japanese government. Fujitsu Taiwan also contributed to previous Legislative Yuan projects including remote disaster recovery, mainframe migration and high availability database systems. This led the Legislature to believe Fujitsu had the capability to build a cloud environment in their datacenters.

The benefit

- Easy-to-manage IT infrastructure with standardized, virtualized and automated design.
- 90% energy cost savings from fewer Cool-safe™ systems and the flexibility to maximize the use of all available resources.
- High availability from the total backup and redundant design, including hardware and SeverView resource management for fast automatic recovery and failover.
- Flexibility, scalability and investment protection from high density BX900 blade server use, to simplify future growth.

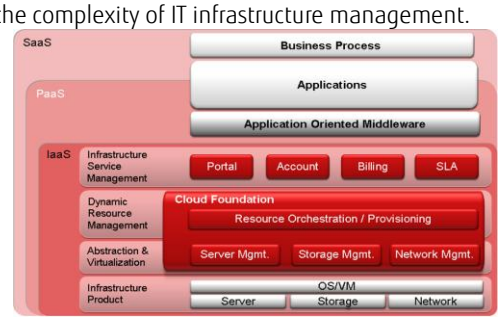
Products and services

- Standardized equipment: Fujitsu PRIMERGY BX900, with the highest blade server density and lowest power use in 10U cabinets in the industry.
- Highly flexible virtualized platform: Based on use of VMware and ServerView Resource Ochestrator (ROR) for highly efficient resource pool management and versatility.
- Automated deployment: based on Fujitsu ServerView Resource Coordinator VE (RCVE) and Resource Orchestrator (ROR) administration for the relationships between VMware, hardware and the operating environments required.



The benefits

- Standardization: The PRIMERGY BX900 blade servers provide a highly available environment with a redundant design that is easy to grow.
- Virtualization: VMware provides de facto industry standard resource virtualization for better server utilization, and improved use of all available IT resources.
- Automation: Fujitsu's ServerView ROR software lays the foundation for automated cloud management enabling dynamic, and automatic resource orchestration that releases administrators from the complexity of IT infrastructure management.

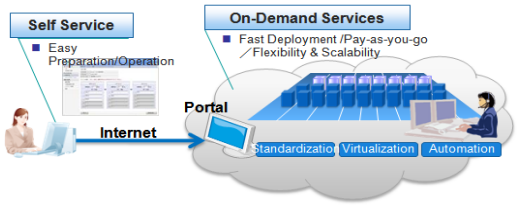


Now administrators can easily and rapidly manage resource allocations. It only takes 30 minutes to assign a new logical server to a service and when it is no longer used it can be returned to the resource pool for reuse. The system also manages the relationships between physical and virtual servers allowing resources to be quickly moved if underlying hardware problems occur. At the same time, overall IT system provides high availability with its complete redundant design; including the ability to hot swap hardware.

The combination of PRIMERGY, the ServerView suite and VMware, also assists in fast automatic recovery and failover of systems if application problems occur.
While the PRIMERGY BX900 blade system enables easy upgrades and future scalability it also has enabled around 90 per cent energy cost savings. The Cool-safe™ design, which not only reduces air conditioning costs, but also prolongs server component live, runs the systems much cooler than comparable servers. Plus with just 18 blades in 20U of rack height there has been a massive saving of floor space in the data center.

Conclusion

Based on their IaaS compliant physical structure, this project enables the Legislative Yuan to move towards a private cloud environment. The Legislative Yuan, see IaaS cloud computing implementation as a whole new experience, which will not only save money but also save more energy and contribute to a greener Taiwan. As for the more than 2,500 employees, whether they are IT administrators or users, the consolidated approach to IaaS adoption also provides a better environment for business process renewal.



With the good evaluation by the customer, and the professional technical support teams in Fujitsu, Fujitsu Taiwan is confident and fully prepared to face further challenges in future cloud implementations and will continue to help customers benefit from their preparation and move to cloud computing technology.

About Fujitsu

Fujitsu is a leading provider of ICT-based business solutions for the global marketplace. With approximately 173,000 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 4.5 trillion yen (US$50 billion) for the fiscal year ending March 31, 2011. For more information please visit us at: www.fujitsu.com

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