Case Study
BSN Information Network Service

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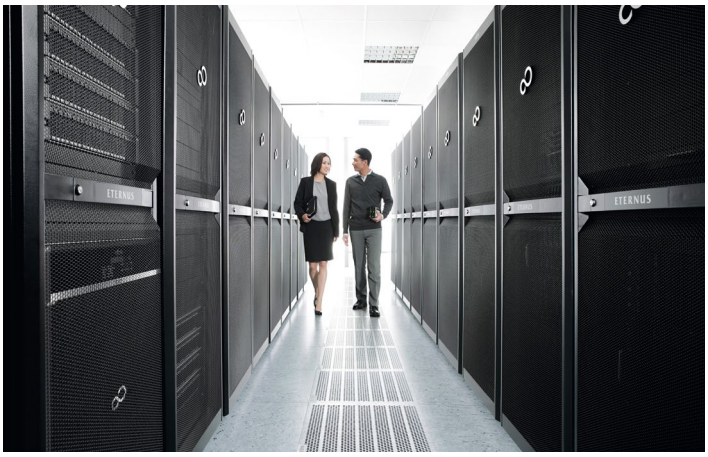
Mr. Motohiko Sakata, Datacenter Division Manager, BSN Information Network Service



The customer

Country: Japan
Industry: Information and Communications Technology
Founded: 1966
Employees: 520 (April 2013)
Website: www.bsnnet.co.jp

The challenge

BSN INET needed to construct a low cost, scalable, next generation cloud service infrastructure and develop efficient remote backup to enhance DR measures. It required a supplier with proven experience in supporting the implementation of leading edge technologies such as Ethernet fabric.

The solution

BSN INET adopted Brocade VDX2730 and VDX6720 to support the construction of a next generation cloud service infrastructure. Brocade's highly advanced Ethernet fabric technology helped to optimize virtualization and create an uncomplicated network environment, new to the market, thus integrating an innovative storage solution with the high bandwidth network.

The customer

Founded in 1966, BSN Information Network Service (BSN INET) is a leading Japanese ICT service provider, headquartered in Japan's Nigata prefecture. In 2009, BSN INET began implementing a business plan to provide a new cloud service from their data center, the 'iNET IMAGE BANK'. Mr. Tomoo Hiroi, Director of BSN Information Network Service's Business Promotion Division explains: "Rather than providing a general public service, this aims to deliver current customers an extension to the existing ICT services that we support."

'iNET IMAGE BANK' allowed the provision of services such as virtual server hosting, virtual client desktops, SaaS via an in-house developed package, and Disaster recovery (DR). In particular, as a result of the new services, there were significant increases in enquiries relating to DR from companies located in the capital.

The challenge

By 2013, due to expansion, it was time to reconsider the infrastructure the cloud service was based on. "Expanding the infrastructure is essential to facilitate growth in the cloud service business. However, it was important that the service limited any increases in cost and operational workload to remain viable. Additionally, we wanted to maintain flexibility to respond to changes in infrastructure requirements following installation. In summary, we needed to identify a next generation cloud service infrastructure that was efficient, flexible and one that could maximize our investment," explains Hiroi.

The solution

A high performance network was a key factor in the construction of the next generation cloud service infrastructure. Mr. Motohiko Sakata, Datacenter Division Manager describes issues with the previous network: "The previous cloud infrastructure connected the storage system directly to the PRIMERGY blade server BX400's switch blade. This meant storage was not effectively utilized, limiting our ability to fully maximize the investment. For this reason, construction of an effective storage network became one of our core targets."

The Ethernet fabric's ability to optimize the virtualization and cloud environment's network architecture, thereby improving scalability and operational efficiency was also an important consideration.

Fujitsu proposed the PRIMERGY blade server with the built-in switch blade Brocade VDX2730 and Brocade VDX 6720 to support construction of the new iNET IMAGE BANK infrastructure. "We knew Brocade was a leader in the FC-SAN field. The technology has a proven track record in Ethernet environments, which was demonstrated by the successful implementation of Brocade VCS (Virtual Cluster Switching) at many other companies," says Sakata.
BSN INET performed a test Brocade VDX implementation within the internal

The benefit

- Lower costs with simplified switch operation, increase scalability of Brocade VCS and optimize storage network to increase storage availability
- ETERNUS NR1000 series provides data compression, de-duplication and SnapMirror to create reliable data replication with lower network use
- Strong Brocade and Fujitsu working relationship ensured highly efficient implementation and operational support including responsiveness to general, technical and translation enquiries

Products and services

- FUJITSU Storage ETERNUS NR1000 F2240* Network Disk Array
- FUJITSU Server PRIMERGY BX400 Blade Server
- FUJITSU Server PRIMERGY BX920 S3 Blade Server
- FUJITSU Server PRIMERGY BX Ethernet Fabric Switch (Brocade VDX 2730)
- Brocade VDX6720 Converged Switch

*ETERNUS NR1000 F series is a NAS product available only in Japan.

virtual environment that was due to be replaced. Based on a positive result, in June 2013 BSN INET officially elected for wide spread implementation of the solution across the internal environment and to switchover to full operation by August the same year. Following this successful experience, the newly optimized network formed the necessary foundation to implement the next generation cloud infrastructure.

In addition to the fabric switch another important product supported the overall solution - Fujitsu's network disk array ETERNUS NR1000F series featuring high performance and storage reliability, as well as robust DR capabilities.

"The next generation cloud service infrastructure will create a DR environment between the remote locations. This is possible through the wide area disaster protection service structure that enhances DR service capabilities. In collaboration with the relevant third party vendors ETERNUS NR1000F series was implemented to enhance DR measures at each of the data centers due to its proven success. This functionality ensures we can reduce transmission data through data compression and de-duplication, compatibility with vSphere and SRM (VMware vCenter Site Recovery Manager), and improve reliable data replication with lower network use by linking it with SnapMirror," explains Sakata.

The next generation cloud service infrastructure configuration is a combination of Fujitsu Blade Server PRIMERGY BX920 S3 and FUJITSU Server PRIMERGY BX Ethernet Fabric Switch(Brocade VDX2730), allowing for flexibility and rapid service scale out. Through integration of the LAN/SAN and consolidation using Brocade VDX2730, the number of switch blades has been halved, ensuring costs are reduced. The storage network is created by relaying the Brocade VDX6720 between the Brocade VDX2730 and the ETERNUS NR1000F series. The VCS system is thereby optimized using 2 Brocade VDX2730 units and 2 Brocade VDX6720 units. Full operation of the next generation cloud service infrastructure was completed November 1st 2013, the same day the DaaS service 'iNET IMAGE BANK DaaS' was introduced for the SMB (Small and Medium Business) market.

"The new DaaS service is leveraged from the multi-tenant environment; we chose ETERNUS NR1000F series for its MultiStore function which logically divides 1 unit of ETERNUS NR1000F series into a multi-tenant base," says Sakata.

The benefit

Mr. Sakata recognizes the dedicated support of Fujitsu and Brocade in contributing to the successful construction of the system. "This was our first experience with VCS and other system technologies. During this time we greatly appreciated the support offered by Fujitsu and Brocade in providing seminars and technical guidance, as well as their highly responsive approach to our questions in general. In particular the Brocade manual that Fujitsu translated to Japanese was an important part of sharing knowledge among our teams."

After testing the connections with other vendor products, it took one week to complete construction of the next generation cloud service infrastructure and switchover to full operation. Via the new infrastructure, BNS INET is now able to offer their new service, 'iNET IMAGE BANK DaaS', which has since attracted a great deal of attention as a competitive enhancement for small and medium-sized businesses.

"We wanted to leverage the advantages of VCS as much as possible. This included the ability to configure multiple physical switches into one virtual switch logically; using automated network configuration feature scale out by simply connecting a switch; physical connection completes the work, increases in bandwidth, possible through a VCS with active/active configuration using redundant switches. Overall, using VCS we want to achieve a simplified, high bandwidth wide area network," explains Sakata.

Mr. Hiroi notes: "We are excited by the prospect of Fujitsu's and Brocade's innovative proposals and meticulous support in the future."

Conclusion

Through the support of Fujitsu, in collaboration with Brocade, BSN INET continues to contribute to the growth and success of local communities by adopting the latest technologies.

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