

Case study

Broadband Media

» Establishment of a High Performance and Low Cost CDN Platform in combination with Fujitsu Servers and Storage Systems «

Lee, Ji-ho, Chief of Broadband Media Technology Strategy Team



The customer

Country: Broadband Media
Industry: Multimedia Service, Database
and Online Information
Founded: 2005
Employees: 130
Website: www.broadbandmedia.kr

broadband media

The challenge

Broadband Media has continuously promoted the expansion of its file server system and CDN (Contents Delivery Network) system since 2007. This was to efficiently respond to requests for IT investment resulting from increases in IPTV subscribers and content. To maximize the efficiency of their IT investments, Broadband Media decided to select providers by BMT (Bench Mark Testing) of their hardware products.

The solution

Broadband Media established an efficient file server system and CDN server system by adopting Fujitsu's PRIMERGY rack server and ETERNUS storage solutions. This was the result of comprehensive consideration of BMT results and offered price. Both Fujitsu platforms received excellent evaluation in aspects of performance, reliability of supplier, user convenience, and TCO. This included recognition of Fujitsu's expert technical skills during the BMT.

The customer

Broadband Media was founded with Celrun TV in 2005 and then named Hanaro Media following a strategic alliance with the network service provider Hanaro Telecom - the present SK Broadband. The number of subscribers to its services passed 30 thousand in just 15 days following commercialization via a TV-portal service, Hana TV, in August 2006. The company subsequently attracted half a million subscribers in July 2007. Now renamed "Broadband Media," its main business is its IPTV Service 'Btv'. This was selected No. 1 IPTV in the 2011 Korean Standard-Quality Excellence Index (KS-QEI). Broadband Media is now positioning itself as the leader in diverse content distribution through IPTV, and the provision of a broad range of bi-directional multimedia services, including high quality content production, and customized and mobile services

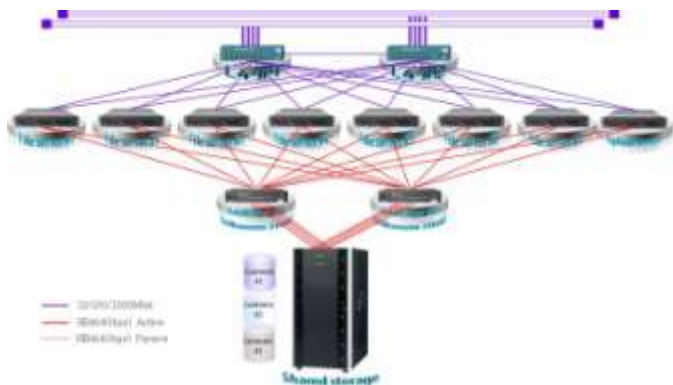
The challenge

The number of domestic IPTV subscribers has greatly increased due to the rapid network development and diversification of content, since the spread of high-speed Internet in Korea. Broadband Media recognized the need to establish infrastructure to efficiently manage the enormous amounts of content and provide smooth access to subscriber-customized content amid the rapid development of both quantity and quality of IPTV services.

Along with the spread of smart phones and tablets, there has been an increase in the establishment of environments to support many new kinds of smart media that differs from the existing single channel TV model. This has required the seeking of IT investments to provide an IPTV convergence service. As a result there has been keen competition between hardware providers to show maximum investment-to-efficiency ratios by putting their server and storage performance to the Broadband Media's benchmark tests (BMT). Broadband Media use its BMT together with assessment of the independent technical skills of each provider to determine the outcome of this competition.

The solution

Since 2007 Broadband Media has required each hardware provider to conduct a BMT before server and storage adoption. The main assessment items in the BMT include, content download speed and available capacity. Proposed price and the performances were also criteria in product selection. For the CDN server Broadband Media selected Fujitsu Korea's solution which provided higher performance and more reasonable pricing than other providers. The file server packaged with seven PRIMERGY two-socket servers and one ETERNUS storage unit minimized the load problems for content search and supply, even during peak periods.



File Server System Configuration

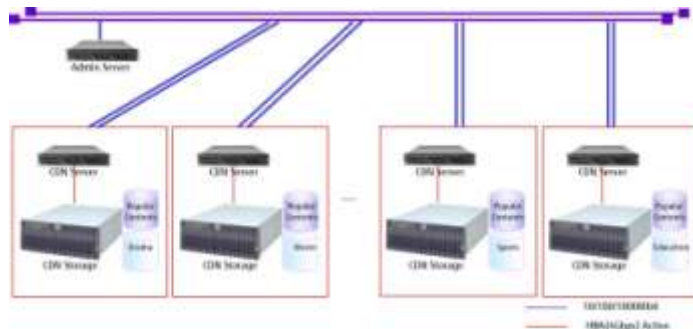
PRIMERGY RX200 S6, 1U height, 19-inch standard rack servers have excellent extensibility with a maximum 12 Cores from the latest Intel® Xeon® 5600 processors. Compared to competitive models, they showed greater expansion capability and better performance, particularly through use of the Intel® Turbo boost technology. 12 memory slots, for growth to a maximum of 384GB, offered diverse memory protection functions including Advanced ECC, Memory Scrubbing, SDDC, and Memory Mirroring.

In addition, the operational costs of the Fujitsu servers displayed dramatic reductions from the 450W power supply module, with its 92% energy conversion efficiency, and the Fujitsu Cool-safe™ technology. This minimizes energy consumption while maximizing cooling performance. Overall the servers correspond to the latest Green IT requirements.



PRIMERGY RX200 S6

Broadband Media's CDN Server now offers user-customized VOD and real-time services by combining Fujitsu PRIMERGY RX200 rack servers and ETERNUS DX80 storage systems in a one-to-one relationship. In this area of specialized content services for specific customers (Closed User Group Service) and its non-linear editing system for broadcasting/editing (NLE, Non-Linear Editing system), Broadband Media needed huge storage space and high processing capability. Plus as the quantity and quality of content increased they needed a model where the demand for higher-performance of both server and storage could also grow.



CDN Server System Configuration

Broadband Media uses two types of storages: mid-range storage model, ETERNUS DX440 S2, and entry storage model, ETERNUS DX80 S2

Fujitsu ETERNUS storage systems are noted for their high performance, capacity, and availability. Each mid-range model DX440 S2 can expand to a maximum of 960TB. The system provides a flexible storage solution which prevents excessive initial investment. This is because it supports purchase of the minimum required capacity initially and then enables easy capacity expansion by addition of additional drive enclosure. Currently Broadband Media uses about 300 ETERNUS storage models



ETERNUS DX440 S2

The benefit

- Establishment of the latest IT infrastructure enabling additional access to servers, SAN backup, and Disaster Recovery in line with system extension
- Flexible traffic management even during times of peak demand for specific content
- Integration of the data within the SAN through large capacity storage
- Smoother customer service through the establishment of a nationwide technology support network and 24-hour system management

The benefit

Broadband Media's file server, consisting of SAN through Fibre Channel, enables additional access to servers, SAN backup, and Disaster Recovery in line with future system extension. Performance load balancing also prevents specific content from causing high load bottlenecks as many servers try to share the same file. High speed data transmission is also supported through the file sharing solution SANique, 4Gbps Fibre Channel, and large storage cache memory.

Data inside the SAN can be integrated through the large storage capacity. Capacity extension as data increases occur can be flexibly managed. New installations start with a usable 30TB with capacity continuously extended in line with the increase in content.

Convenient management is provided by a GUI-based storage integrated management solution. This provides single console operation irrespective of the additional storage adopted. In addition, Fujitsu's remote sensing technology support service (REMCS -REmote Customer Support) enables fault prevention and quick response. REMCS provides early detection and fast notification of any fault in the Broadband media storage system. Even minor faults not sensed by the operator are automatically notified. This enables preemptive action before any serious trouble occurs. As a result the customer management system can be stably operated and service availability has increased.



REMCE (REmote Customer Support)

Products and services

- Rack server RX200S6
- Mid-range storage system ETERNUS DX440
- Entry storage system ETERNUS DX80
- SANique CFS

Conclusion

Fujitsu Korea has successfully completed the infrastructure establishment project in cooperation with Broadband Media for its CDN service which commenced in 2008. In particular, the positive Fujitsu Korea engineering support has received favorable evaluation from Broadband Media. This included help from Fujitsu Korea throughout their basic system design and hardware implementation. Lee, Gi-ho, the Chief of the Broadband Media Technology Strategy Team at Broadband Media, said Broadband Media is very satisfied with Fujitsu Korea's service, not simply the sale of products but in their help throughout the customer project.

Broadband Media is now seeking positive cooperation with Fujitsu Korea, based on diverse knowledge of x86 system establishment and technical knowhow. This includes the addition of new systems and IT infrastructures for future businesses. In the workplace, favorable reviews have continued with IP-based codec equipment such as FutureEye IP9400 as well as other Fujitsu product families including x86 PRIMERGY servers and ETERNUS storage solutions. In the knowledge of such high performance and stable platforms and the sustainable support system and quick reaction advantages of Fujitsu Korea, Broadband Media is progressing towards its goal to grow as a global company in the field of bi-directional multimedia services.

About Fujitsu

Fujitsu is the leading Japanese information and communication technology (ICT) company offering a full range of technology products, solutions and services. Over 170,000 Fujitsu people support customers in more than 100 countries. We use our experience and the power of ICT to shape the future of society with our customers. Fujitsu Limited (TSE:6702) reported consolidated revenues of 4.5 trillion yen (US\$55 billion) for the fiscal year ended March 31, 2011. For details, please visit : www.fujitsu.com

The interview

Q1. Why did you establish CDN Server?

A1. Broadband Media has grown rapidly since its demonstration service in 2006 and acquisition of half a million subscribers by July 2007. 'Hana TV Season 2' starting in 2008 provided diverse additional services such as cartoons, preschool education, and a PVR service. To continuously attract new and secure existing subscribers, the most important factors have been securing high quality content and providing it quickly and stably. Accordingly, Broadband Media implemented its first equipment establishment project in 2007.

Q2. Why did you select Fujitsu Korea's model?

A2. Broadband Media requested each hardware provider to conduct our BMT to allow careful establishment of infrastructure and fair evaluation. As a result of that comprehensive evaluation of hardware, and Fujitsu's ability to establish a system and provide comprehensive pricing, we saw they had had excellent performance and reasonable prices, compared to other companies.

In addition to hardware, comprehensive system configuration, mounted solutions, and the speed to search and provide content were all evaluated. As system configuration differed only slightly between competitor's implementations, the difference in technical skills might have been the main influence on final price considerations.

Q3. What is your future plan for IT Projects?

A3. Broadband Media is providing the current "Btv" service based on the development its initial IPTV business. In the education field, first of all, the company is promoting 'Happy IPTV Study Room' an IPTV based audio-visual education space for vulnerable children and youths in 60 places across the country. The company is also a co-producer of an animated cartoon series winning popularity with children, "Pororo the Little Penguin," and has been exclusively servicing 'Robocar Poli' since last year. The company is now focusing on diversified and bi-directional content such as real-time college scholastic ability tests, lecture services, Doosan Dong-a 'Edu-Club,' and a real-time traffic information service.

Since the CUG (Closed User Group) service for specific customers also requires smooth supply of content, the establishment of the high performance and stable file server and CDN server is significant at this juncture.

Fujitsu Korea has established a great level of trust since its initial work on Broadband Media's systems in 2008, and has been highly reviewed during the adoption of the latest technology and economic benefits. Another Fujitsu advantage is its positive support, such as understanding and proposing solutions to Broadband Media's technology needs, and helping us keep up with the development of servers and storage. Broadband Media is also expecting Fujitsu Korea's positive support and cooperation in future business extensions.

In collaboration with

broadband media

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