

# Case study Hyundai Securities

»Reliable Virtual Desktop Infrastructure operation is available due to the Fujitsu Blade Server system«

MH Kim, Director, IT security Dept. InfraSystem Div. Hyundai Securities



## The customer

Country: Korea  
Industry: Finance  
Founded: 1962  
Employees: 2,500  
Website: [www.youfirst.co.kr](http://www.youfirst.co.kr)



## The customer

Hyundai Securities was established in 1962 as Kookil Securities, with the name changed to Hyundai Securities in 1986. In the seven consecutive years since 2004 the company has taken first place in the annual assessment of overall business and communication areas, conducted by Stockpia. Hyundai has concentrated on its capabilities in online services by reinforcing such online operations, as well as establishing an online business group to discover new opportunities to further expand its online service delivery; with the aim of achieving its vision of being: "The best financial solution, the best investment bank in Korea".

## The challenge

Demands for cost reductions have greatly increased, in the financial industry, with the economic depression expected to last a long time, due to the global economic crisis and expanding financial crisis. In addition the IT departments of finance industry companies are also facing problems in resolving security issues, following a series of security incidents including information leaks and hacking. The Korean domestic financial industry is therefore concentrating on establishing a next generation Information Strategy Plan (ISP) and an action plan to address these issues.

## The challenge

Hyundai Securities planned to construct a cloud-based IT infrastructure to cope with the global financial crisis and reinforce its security levels. However, as multiple virtual machines would operate on each physical server, it would be important to secure the reliability and stability of hardware and construct a cost-effective system. Hyundai Securities looked to progress its cloud based IT infrastructure construction using a phased introduction supported by rigorous testing.

In addition, with a planned move to application operation on virtual machines, hardware panics on servers have the potential to cause multiple virtual machines and their applications to cease operation. Therefore the reliability of the hardware would be a very important factor in virtualization adoption. This is especially true in the financial industry where just a few minutes of failure could have a negative effect on the perceived reliability of the company. So "Reliability" and "Safety" are big issues in constructing a cost-effective system, and as this would be part of a phased approach to cloud based IT infrastructure adoption, it would also need radical testing.

## The solution

Hyundai Securities constructed a reliable Virtual Desktop Infrastructure (VDI) using a Fujitsu PRIMERGY BX900S1 blade chassis with 16 PRIMERGY BX920S2 blade servers and the Citrix XenDesktop VDI solution. This provided good results in the assessment of the reliability of the servers and vendor service, operational convenience and cost.

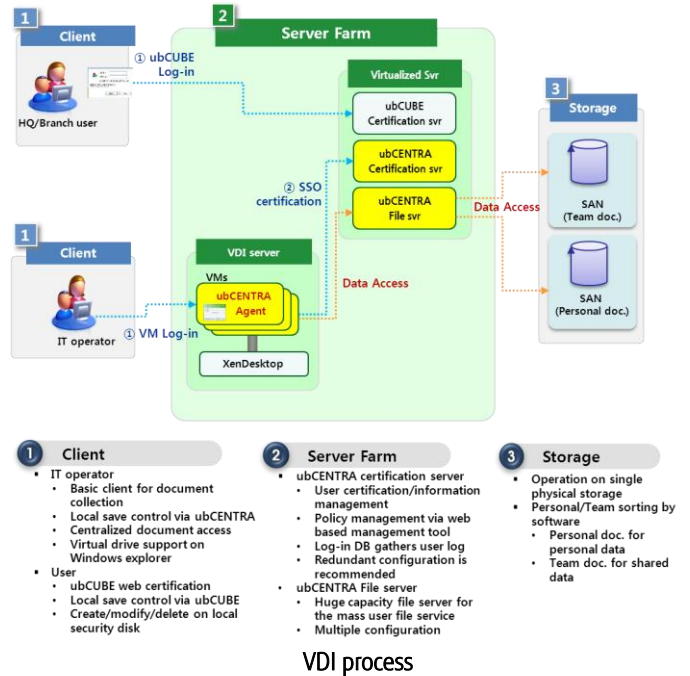
**The solution**

After precise determination of the various servers and solutions, Hyundai Securities finally selected a Fujitsu PRIMERGY Blade system, based on BX900S1 blade chassis, BX920S2 blade servers and Citrix XenDesktop 5 for their VDI infrastructure.

Hyundai Securities tested each solution offered on the basis of its server reliability and that of its vendor, plus convenience and total cost. The very marked performance reliability of the BX900S1 blade servers in the workload tests and the good connectivity to the ETERNUS DX80 storage system, plus previous references, all helped in the final consideration.



Fujitsu Blade server PRIMERGY BX900 S1



Fujitsu Korea Ltd., already had successful Unix server virtualization project references. In addition the enthusiastic and skilled support from Fujitsu Korea’s engineers was well appreciated by the customer. Fujitsu Korea helped with the system design and hardware system construction. MH Kim, IT department Director at Hyundai Securities commended the service of Fujitsu Korea, as not just selling the product, but also supporting the customer’s general project development.

**The benefit**

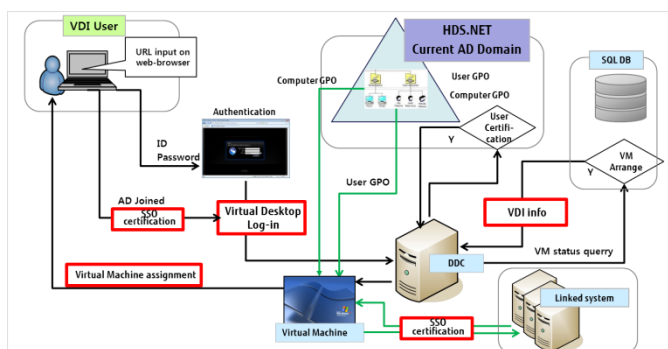
- Reductions in TCO and IT operator workloads
- Construction of an information security system that blocks leakage of internal information, completely.
- Improved data management and protection system through centralized management of work data.
- Better customer service support through construction of a mobile work environment and 24 hour monitoring and management support system.

**The benefit**

Hyundai Securities completed their VDI project in just 4 months from vendor selection. They also saved valuable IT space by consolidating all their server systems into a single 10U blade chassis. Maintenance costs and operator workloads were also reduced dramatically by the centralization of data. Blade server use saved on total cost compared to the previous rack servers, and immediate hot-swap capability of the blade system ensured availability and business continuity.

The desktop virtualization has allowed the network to be divided into both an internal and external network structure. This prevents external intrusion and internal information leaks, and has implemented centralized management of information in the working system through system virtualization. This virtualization project, introduced for 200 IT staff, including external contractors, is the largest deployment in the Korean domestic stock trading industry. As well as fundamentally preventing the leakage of company information it also provides smooth customer service and enables 24 hour system management support through the introduction of a fully mobile work environment.

Introducing the virtual desktop infrastructure has completely enhanced the security level of the internal systems. External network access without permission is denied and external storage devices including USB drives are not permitted. The system has improved management efficiency through its support of emergency system monitoring through SSL VPN. This allows the system to be accessed externally from home or remote offices and for emergency access during periods of computer and network trouble.



User access flowchart

**Products and services**

- Blade Chassis (Enclosure) BX900S1 1 unit
- Blade Server BX920S2 16 units
- Citrix XenDesktop 5

**Conclusion**

Hyundai Securities plans to extend its virtualization technology with further desktop virtualization, in the short term, with a final goal of building a cloud IT infrastructure that can provide full Infrastructure as a Service (IaaS) and Software as a Service (SaaS) capability. This will better help the company continue to provide a flexible IT environment to cope with the rapidly changing financial industry business environment and changes in regulations. Hyundai Securities also has its eye on the introduction of next generation x86-Linux based systems, which have become a hot issue recently.

Hyundai Security is looking for positive cooperation with Fujitsu Korea Ltd., with their various x86 system construction references and technical know-how. Fujitsu Korea Ltd., is also appraising the merits of use of Mission Critical servers such as PRIMEQUEST, that assure Unix-server level reliability at less expense, and PRIMERGY – industry standard servers with their cost-effective performance, continuous support system, and emergency technical support capacity. Hyundai Securities is now planning this roadmap to remain Korea’s No.1 investment bank.

**About Fujitsu**

Fujitsu is a leading provider of information and communication technology (ICT)-based business solutions for the global marketplace. With approximately 170,000 employees supporting customers in over 100 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\$55 billion) for the fiscal year ended March 31, 2011. For more information, please see: [www.fujitsu.com](http://www.fujitsu.com)

**The interview**

Q1. What was the reason Hyundai Securities introduced desktop virtualization?

A1. The hottest issue in the finance industry this year has been information security. Customer complaints have grown about internal information control at financial companies due to customer information leaks by internal employees. In addition, the company decided to implement this project to handle regulatory issues like the Personal Information Protection Act.

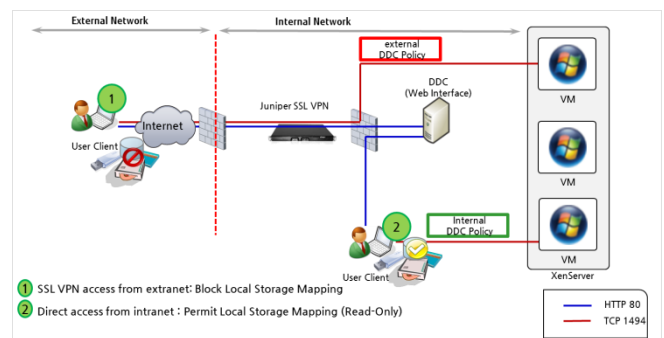
Q2. Why did Hyundai Securities select Korea Fujitsu products?

A2. It was a result of overall assessment. Hyundai Securities completed the first phase, Unix server virtualization project, in 2010 using Unix servers via Fujitsu Korea Ltd. The company was able to reduce a total of 34 Unix servers to 4, and the effects were reductions in space required and maintenance costs. As the company realized the safety and benefits of server virtualization, it started implementation of the second phase of the Unix server virtualization project. This included the decision to implement VDI to improve both the security levels at the company and work efficiency.

Virtualization in the financial industry is implemented solely under the logic of 'reliability' and 'safety'. It is deployed through trial operation despite the rapid development of virtualization technology. The products of Korea Fujitsu scored highest as they provided stable performance to server loading and excellent connectivity with existing storage products of Korea Fujitsu. Various references with Citrix and our expectations of professional engineers at Fujitsu Korea Ltd. were also helpful.

Q3. What has changed since the introduction of desktop virtualization?

A3. The biggest achievement was the construction of a perfect security environment, which was the main purpose of this project. External access without permission was blocked through the network separation effect, and information leakage paths via USB and messenger have been fundamentally blocked by applying security solutions to the virtual desktop. Further the system has improved management efficiency as it now supports emergency system monitoring through SSL VPN allowing the system to be accessed from outside ( home, office) including emergency access during periods of computer and network trouble.



User security policy

Q4. What are the future IT project plans?

A4. The plan is to expand the scale of our currently constructed desktop virtualization project in the short term, and then introduce the system to our customer center and research department by next year. The long term plan is to complete the cloud IT infrastructure and provide services like SaaS and IaaS. Hyundai Securities also plans to introduce a Linux based next generation system based on the introduction of a x86-Linux based next generation system from Korea's stock exchange.



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