

Hitachi Storage Solutions at Work

Korean Ministry of Foreign Affairs and Trade

INDUSTRY Government

SOLUTIONS Business Continuity/Disaster Recovery

Hardware—Hitachi Lightning 9970V™ single-cabinet enterprise storage system

Software—Hitachi TrueCopy® Remote Replication and Hitachi ShadowImage™ In-System Replication software

Services—Provided by LG CNS



“At first, it was very demanding to set out this gigantic project as a disaster recovery system project in order to connect Korea in Asia to the U.S. in North America. But now this disaster recovery center provides incredible benefits, which exceeded our expectations, and it also contributes to diplomatic bridge building.”

*Park Nam-sun
Diplomatic Information Officer
Korean Ministry of Foreign Affairs and Trade*



외교통상부
Ministry of Foreign Affairs and Trade

 **HYOSUNG INFORMATION SYSTEM CO., LTD.**

Hitachi Data Systems Helps Korean Diplomatic Corps Extend Its Reach

To create an intercontinental disaster recovery system that would overcome bandwidth limits and ensure secure, highly available global data access, Korea's Ministry of Foreign Affairs and Trade chose to employ solutions from Hitachi Data Systems.

Korea's Ministry of Foreign Affairs and Trade (MOFAT) works to maintain peace and prosperity in the Korean peninsula and positive diplomatic and trade relations with other nations. Korea is the world's 11th greatest economical influence, and has been revamping much of its IT infrastructure to support that important global position. MOFAT established a long-term diplomatic Information Strategic Plan (ISP) in 2002. A key objective of this project/plan is to increase communications capabilities among the country's diplomats, who are spread across 140 embassies, with other governments, and with the public.

The ISP required support from an integrated data center—one that includes electronic document management, information management, risk management, decision-making support, human resource management, and e-learning capabilities. It also required construction of a flexible network that secured solid safety and high reliability. In addition to supporting these "e-diplomacy" efforts, the ISP mandated the

upgrade of base facilities, including system and network backup, and disaster recovery to construct its infrastructure.

Business efficiency has been improved through the first phase of the project: the installation of an information portal system, integrated search system, and SSO (Single Sign On) system. A second phase of the e-diplomacy project focuses on the ability to distribute documents electronically between MOFAT headquarters and embassies abroad. A third stage establishes a data center in the U.S. to function as a disaster recovery center and a data backup center, and to provide continuous business operations.

High Availability Is key

A key component to ensuring high availability was the establishment of both a data center in the U.S. and an integrated monitoring system in the Seoul headquarters—made challenging by a 12,000km separation. This U.S. data center would be the first foreign

data center commissioned for a Korean public agency. The new data center would need to function as a remote backup and disaster recovery center.

MOFAT had already established a U.S.-based disaster recovery center to support its embassies throughout the Americas, so it was a natural step to expand on that effort rather than build a completely new data center elsewhere. "The bandwidth available for Seoul and the U.S.-based disaster recovery center was the greatest. Furthermore, the U.S.-based disaster recovery center possessed numerous well-trained IT employees," says Park Nam-sun, diplomatic information officer at MOFAT's Diplomatic Information System Division. Also, the 12-hour time difference between Korea and U.S. enabled the system to perform data backup during off-duty hours.

But concerns remained. It seemed an unfeasible disaster recovery system project to connect Korea and U.S., 12,000km away from each other. Lee Young-soo, an assistant manager at IT service provider LG CNS, recalls, "Numerous and elaborate suggestions were required on this project to cover the huge distance from Asia to North America, and our choice of Hitachi TrueCopy® Remote Replication software, with its high performance, safety, and efficiency, was the driving force behind this project's success."

Overcoming Bandwidth Limits

MOFAT has a bandwidth limit in its broadband diplomatic information network, which the disaster recovery solution had to overcome. This meant replicating part of the core business data located in the integrated storage at the U.S.-based data center. LG CNS chose Hitachi ShadowImage™ In-System Replication software to answer this challenge.

Hitachi Data Systems also helped overcome another bandwidth-related limitation: due to extreme distance constraints, the originally planned synchronous replication was not an option. "With storage using synchronous replication, there were too many difficulties," says Lee Young-soo of LG CNS. His solution was the Hitachi Lightning 9970V™ single-cabinet enterprise storage system employing the asynchronous capabilities of TrueCopy software, and, soon after installation, he achieved the more reliable results.

Thanks to its pure disk mirroring technology, TrueCopy software enables remote data migration through the IP network in real time—and without the use of server resources.



In addition, the Lightning 9970V system seamlessly replicates data in the shortest time frame.

At the same time, engineers from Hitachi Data Systems and Hitachi TrueNorth™ Channel Partner Hyosung Information Systems worked to increase the bandwidth of the Korea-U.S. connection from 20Mbit/sec to 50Mbit/sec and also to optimize data transfer, which together reduced the replication time from five days to 35 hours.

Realizing Successful Remote Disaster Recovery

"As MOFAT is a government organization responsible for national diplomacy, not every member of the organization needs to understand the meaning and effects of the disaster recovery system we've established," says Park Nam-sun. "However, we are proud of having played a tiny but a significant role in the organization. The disaster recovery center's benefits were more than that we expected, and it is generating fully satisfactory results."

The project to institute Korea's first remote disaster recovery system has established MOFAT as a pioneer. "It was very demanding

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to set out this gigantic project as a disaster recovery system project in order to connect Korea in Asia to U.S. in North America. But now this disaster recovery center provides incredible benefits, which exceeded our expectations, and it also contributes to diplomatic bridge building." adds Park Nam-sun.

About Hyosung Information Systems

Hyosung Information Systems Co., Ltd., a joint venture of Hitachi Data Systems in the United States and the Hyosung Group in Korea, currently markets/supports storage hardware, software, solutions, and services from Hitachi Data Systems. The company is expanding to include consulting, comprehensive services and support, software, and other midrange products to become a total storage solution provider.

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