



Case Study

Intel® Core™ vPro™
Processor Family

Financial Service
Bank ATM System

Enhancing Customer Service with ATM Remote Management

Looking to enhance its customer service through efficient ATM management, Shinhan Bank became one of the first banks in the world to adopt Intel® vPro™ technology. With help from Intel vPro technology, Shinhan Bank is showing its commitment to customer-oriented technology innovation.

Current Tasks

- **ATM remote management system.** Time- and cost-wise, it was inefficient for the bank's personnel to manage more than 5,000 ATMs across Korea.
- **Prompt handling of errors.** Since downtime causes the company to lose customers, prompt error handling and recovery were essential.

Solutions

- **Adopting Intel® vPro™ technology.** Shinhan Bank adopted Intel® vPro™ technology for 1,500 of its ATMs.

Effects

- **Consistent and seamless management of ATMs.** Costs were reduced, since the remote management system has enabled ATMs to be managed as a group.
- **Prompt response to breakdowns.** ATM breakdowns are now immediately monitored and resolved, minimizing customer inconvenience and preventing the possible loss due to downtime.



“The manual management of ATMs in myriad locations was time consuming, and their management as a group was difficult, so it was inefficient in terms of time and cost.”

Ha Ok-sang
Senior Manager (IT Management
Division), Shinhan Bank

Prompt and Simultaneous ATM Management

Shinhan Bank needed to simultaneously and centrally manage its network of ATMs, in which were manually managed by branch. The bank's labor-intensive management system was very time consuming, demanding an average of two to three hours to check the ATMs at each branch and resolve any errors. For some branches, checking the ATMs even took one or two days.

ATM downtime directly and indirectly affects the bank's revenue generation and image, so finding an efficient management system that would minimize ATM downtime was crucial.

Shinhan Bank realized it would soon need to expand its workforce to check all of the ATMs in the nation. Even after hiring more technicians, it would be a challenge to manage such a high number of ATMs and accurately review the assets. The Bank knew that efficient asset management could also dramatically reduce management cost and prevent possible loss from unexpected breakdown.

After considering several solutions, Shinhan Bank conducted a pilot project with Intel vPro technology-based PCs in 3,000 in branches nationwide. The results of the project showed that faster breakdown detection and response could minimize PC downtime, and enhance the efficiency of asset management and security systems. Based on the results, the bank decided to adopt Intel vPro technology for all of its ATMs.

Shinhan Bank uses Intel vPro technology to efficiently manage its ATM network nationwide and reduce costs while improving service levels

One of the First Banks to Establish an Efficient ATM Management System by Adopting Intel® vPro™ technology

Shinhan Bank began by applying Intel vPro technology to 1,500 ATMs out of a total of 5,000. Since it was an unprecedented technical adoption, Intel spared no effort in providing technical advice and support.

Shinhan Bank ended up successfully managing its ATMs remotely using Intel vPro technology supported by Intel® Active Management Technology. Now there is no longer a need to dispatch ATM technician for asset management, error detection/discovery—substantially reducing labor cost for maintenance. Manager Kim Jang-eon of Shinhan Bank's IT Management Division says, "It can take up to four hours to travel to and return from a site, and an average of one to two hours depending on the traffic volume. It is not cost-efficient to take two to four hours just to check an ATM or resolve simple breakdowns."

Adopting Intel vPro technology has enabled prompt nationwide ATM asset management en masse. Accurate asset detection is as critical as revenue generation. An automatic asset check is faster and more accurate than the manual option.

Adopting Intel vPro technology has brought about great improvement in the remote detection of the ATM's status. When an ATM error occurs, the BIOS status of the ATM can be remotely diagnosed and the CMOS can be remotely manipulated. This minimizes downtime by changing the setup of the backup hard disk where the same OS and application image were installed and the main disk of the hard disk where the breakdown occurred. Just like the PC management system, the OS can be remotely transmitted and installed in an ATM. This dramatically reduces time spent compared to the maximum four minutes for the existing management system.

Kim Jang-eon says, "The end result of a prompt remote error recovery system is minimized ATM downtime. Longer ATM downtime results in the majority of customers using the ATMs of other banks, and this may lead to customer leakage. The main goal of Shinhan Bank in efficiently managing ATMs is to increase customer satisfaction among ATM users."

Another benefit of Intel® vPro™ technology is enhanced security system which is enabled by a platform consisting of a processor, chipset, and a network solution. Upon detecting a new virus in a network or software application, the chipset of Intel vPro technology recognizes the virus pattern and shuts out the virus, so ATM security has been enhanced as a mission-critical financial service.

Shinhan Bank plans to attract more customers by enhancing its customer service with efficient ATM management. Drawing on its successful remote ATM management experience, Shinhan Bank plans to adopt Intel vPro technology in its remaining 3,500 ATMs.

"Just as it is possible to remotely manage PCs, Shinhan Bank adopted Intel® vPro™ technology to remotely manage ATMs. Error detection, recovery, and repair for ATMs are promptly conducted in order to reduce management costs and improve customer service."

Ha Ok-sang
Senior Manager (IT Management Division), Shinhan Bank

Spotlight: Shinhan Bank

- Shinhan Bank is at the forefront of bringing digital technologies to the financial sector by being the one of the first banks in the world to adopt Intel vPro technology for its ATMs.
- Currently, about 1,500 ATMs are remotely managed, with as many as 5,000 ATMs planning to feature Intel vPro technology in the future.
- Since Shinhan Bank remotely manages ATMs, there is no need for ATM management operators to travel to and from sites. This significantly reduce the labor cost for maintenance.



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