



Daewoo Securities Makes Financial Market Decisions Faster with Informatica

WINNING THE RACE WITH TIME

“Securities companies always have to fight against time,” says Ilhun Lim of Daewoo Securities, demonstrating how well he understands the essential challenge of the securities business. “We recognized that a real-time processing environment would improve business agility, enhance the quality of service, and ultimately lead to increased customer satisfaction.”

And that’s just what Daewoo Securities did with new technology. It tied its incompatible operational and analytical systems together with the Informatica® data integration platform that processes changes in real time. Today, Daewoo Securities is able to respond to market demands, take advantage of changing market conditions, and avoid competitive threats. The cornerstone of this competitive advantage is technology that has increased data processing performance threefold. Order processing is now 50 percent faster, and recovery response time, if there should be a failure, has been cut from a deadly four hours to only 25 minutes.

“Business agility in the global securities market is all about access to timely, relevant, and trusted information. With the Informatica real-time data integration platform, Daewoo Securities is able to react more quickly to the demands of the securities market, changing market conditions, and competitive threats.”

— Ilhun Lim, E-Business Systems Manager in the IT Center, Daewoo Securities

Daewoo Securities is a leading investment firm offering a wide range of financial services in South Korea and worldwide. It focuses on securities trading and brokerage, underwriting, asset management, and international corporate finance. Established in 1970, the company has grown to support 122 branches and 5 overseas networks, with 3,199 employees. Today, Daewoo Securities ranks among South Korea’s top domestic brokers, with the highest market share in the country’s securities industry.

Challenge

The busiest time of the day for a securities company is the first 30 minutes after the markets open. That’s when the financial markets are responding to overnight market and macro-economic changes from around the world. In that first half hour, Daewoo Securities typically undertakes between 1,000 and 2,000 securities transactions per second. It is imperative therefore that the data regarding these transactions be processed quickly and accurately. A delay as small as a microsecond can detrimentally impact sales revenues and customer satisfaction and might lead directly to a loss of competitiveness for the firm.

And that was the root of the problem for Daewoo Securities. The company's remarkable success in the securities business is supported by two critical sets of computer applications: operational systems, which process the day-to-day securities transactions, and analytical systems, on which the trading community relies to review the market situation, spot trends, and evaluate its decisions. To link the two and deliver data to the people and systems that needed it, Daewoo Securities was relying on a data integration solution that was delivering dangerously unsatisfactory performance, causing delays in access to data critical for investment decisions. In addition, when this system had to process large volumes of data, which was not atypical, it had been known to fail altogether.

The problems didn't stop there. The data formats and the processing methodology between the operational systems and analytical systems were incompatible, so Daewoo Securities was relying on complex hand coding to marry data between the two systems and ensure data accuracy. Any change in either of these systems necessitated additional hand coding. But this had to be accompanied by extensive collaboration among multiple system administrators; even a small "quick fix" in one system, without careful consideration of the interacting systems, threatened a high risk to data accuracy or even availability.

Solution

Accessing Timely, Relevant, and Trusted Information

Ilhun Lim is the e-business systems manager in the IT center at Daewoo Securities. He explains why access to timely, relevant, and trusted information is probably more important to securities companies than to almost any other type of organization. "Securities companies always have to fight against time," he says. "Our business demands micro-second performance and if data is processed too slowly, our sales representatives cannot transact or make decisions as quickly as our competitors—and this puts the company at a serious disadvantage. For this reason, the securities industry places a strong emphasis on the importance of real-time data processing—more so than other financial institutions—and demands for this real-time processing are increasing. We recognized that a real-time processing environment would improve business agility, enhance the quality of service, and ultimately lead to increased customer satisfaction."

Daewoo Securities needed technology to reliably provide masses of accurate data through real-time data integration that standardized the interfaces between its operational and analytical systems. As part of this real-time data integration strategy, Daewoo Securities focused on three key areas: real-time data processing, data conformity, and continuous and effective data monitoring. The company performed a month-long market evaluation asking selected vendors to tackle issues across various integration scenarios

created by Daewoo Securities. These scenarios evaluated the stability and performance of the different solutions—and the breadth and scope of each vendor's technical ability.

Based on this evaluation, Daewoo Securities chose Informatica PowerCenter® with the Real Time Option along with Informatica PowerExchange®. In addition to receiving high scores for data extraction and processing performance, Informatica was the only solution to enable real-time implementation within a unified data integration platform. This unified platform combined with the Real Time Option gives Daewoo Securities a resilient enterprise data integration platform for discovering, accessing, and integrating data from almost any of the company's systems, in any format—and at any speed.

The solution offers extensive capabilities for the integration and provisioning of securities-related data in real time. The PowerExchange Change Data Capture Option™ catches changes to data the instant they occur and forwards only the changes, thus assisting performance while keeping the latest, most accurate data at the decision makers' fingertips. Change data capture integrates relational data sources as well as Daewoo Securities' customer data.

Orchestrating High Performance & Ensuring Data Conformity

The first and most important task for this highly available and scalable enterprise data integration platform was to improve data processing performance between the source and target systems, both of which run on Oracle 10g. The teams from Daewoo

Securities and Informatica began by analyzing the performance and operation of the existing system and data flows to orchestrate the architecture for real-time securities transaction processing and analysis. Based on the results of this analysis, Informatica developed and optimized a mapping process to apply existing business logic and configure the architecture for the best performance. These improvements have made a significant contribution to Daewoo Securities' efficiency, decision making, and trading capability.

Mitigating Risk with Error Processing & Failure Recovery

Informatica is also the cornerstone of a plan to mitigate risk in two critical ways. First, Daewoo Securities took advantage of Informatica's built-in error processing function. In the unlikely event that an error occurs while securities data is being processed, it is recorded in a separate error log provided by PowerCenter. This data can then be separately processed to ensure data conformity but does not interfere with processing the large quantity of good data.

The second critical area of significant risk was the possibility of hardware failure. The previous recovery process could take up to 4 hours, but now with Informatica recovery has been reduced to a mere 25 minutes. Improved error processing along with streamlined recovery are critical building blocks in an overall risk mitigation program at Daewoo Securities.

"A simple hardware failure can influence productivity on the entire trading floor, so it was very important to minimize any delay via a rapid recovery technique," says Ilhun

Lim. "By using Informatica to build a real-time data infrastructure, Daewoo Securities has achieved key benefits in terms of data processing speed, data conformity, and change data management. Overall, this system is contributing greatly to the long-term development of Daewoo Securities and has given us a cushion against risks to our competitiveness."

— Ilhun Lim, E-Business System Manager in the IT Center, Daewoo Securities

Lim. "Prior to launching the system and as a means of checking stability, we conducted a failure recovery test. The Informatica solution resolved the problem in 25 minutes, a dramatic improvement over the 4 hours required by the existing system."

Improving Order Processing by More Than 50 Percent for Increased Customer Satisfaction

With business success measured in micro-second performance, Informatica is helping Daewoo Securities to introduce real-time data processing, for improved securities trading and brokerage success. PowerCenter and PowerExchange have enabled the company to increase the data processing performance threefold compared to the existing system. Order processing speed has improved by more than 50 percent, and the company is now working with more reliable and accurate mass data processes. The bottom line of this real-time data integration is improved satisfaction among the thousands of customers for the securities trading services.

"Business agility is all about timely, relevant, and trusted information," says Ilhun Lim.

"With Informatica real-time solutions, Daewoo Securities is able to react more quickly to the demands of the securities market, changing market conditions, and competitive threats."

Reducing Time to Market

The Informatica platform is also accelerating the development of new securities solutions and increasing business efficiency. Real-time data integration enables the extraction and analysis of critical data that is being used to perform customer trend analysis, product analysis, and sales forecasting—all based on real-time, accurate data. By providing this information to the appropriate teams, Daewoo Securities has the timely, relevant, and trusted information it needs to bring new securities solutions to market faster and more effectively.

Ilhun Lim concludes, "By using Informatica to build a real-time data infrastructure, Daewoo Securities has achieved key benefits in terms of data processing speed, data conformity, and change data management. Overall, this system is contributing greatly to the long-term development of Daewoo Securities and has given us a cushion against risks to our competitiveness."

Fast Facts

Business Initiatives

- Accelerate decision making and agility via real-time access to crucial securities information
- Enhance the quality of service and customer satisfaction
- Mitigate risk with improved error processing and a failure recovery process

Technology Strategy

Deploy Informatica PowerCenter and Informatica PowerExchange to create a resilient and unified enterprise data integration platform for discovering, accessing, and integrating data from almost any of the company's systems, in any format—and at any speed.

Benefits

- Enabled Daewoo Securities to react more quickly to the demands of the securities market, changing market conditions, and competitive threats
- Introduced real-time data processing, for improved securities trading and brokerage success
- Increased data processing performance threefold compared to the existing system
- Dramatically mitigated risks associated with error processing and hardware failure
- Accelerated order processing speed by more than 50 percent
- Provided the timely, relevant, and trusted information necessary to bring new securities solutions to market faster
- Reduced recovery response time after failure from up to 4 hours to only 25 minutes

Nuts and Bolts

- Data Integration:
 - Informatica PowerCenter with the Real Time Option
 - Informatica PowerExchange Change Data Capture Option
- Source: Oracle 10g
- Target: Oracle 10g
- Platform operating System: IBM AIX 64

LEARN MORE

Learn more about insert Informatica PowerCenter, Informatica PowerExchange, and the entire Informatica product platform. Visit us at www.informatica.com or call 800.653.3871.

ABOUT INFORMATICA

Informatica enables organizations to gain a competitive advantage in today's global information economy by empowering them to access, integrate, and trust all their information assets. As the independent data integration leader, Informatica has a proven track record of success helping the world's leading companies leverage all their information assets to grow revenues, improve profitability, and increase customer loyalty.



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First Published: 2008

6887 (11/18/2008)