

COINSTAR

Solution Overview

Industry
Service

Scenario

Coinstar needed a solution that would handle high transaction volume and would update the corporate records nightly to allow them to pay their supermarket partners in a timely manner

Company Profile

Coinstar owns and operates the only nationwide network of supermarket-based machine that offers coin counting and other electronic services.

Benefits

Thanks to Microsoft eEnterprise, Coinstar has realized easy access to information, a strong accounts payable solution to pay their partners and minimal customization needed to integrate their systems.

Software Used

Microsoft Great Plains eEnterprise
Financial Series
Distribution Series
Integration Manager
Microsoft SQL Server
Automated Clearing House (ACH)

Integrating the Coinstar network with a Microsoft windows-based accounting system—Microsoft Great Plains eEnterprise—has eliminated the need for a large-scale customer application and saved Coinstar 11 months of development time.

Coinstar owns and operates the only nationwide network of supermarket-based machines that offers coin counting and other electronic services. Linked by a sophisticated interactive network, the company has 9,000 machines throughout the United States, Canada, and the United Kingdom. These machines convert coins—which are no longer accepted by many banks—into cash.

During the holidays, one of Coinstar's field service engineers helped a woman process more than \$850 in coins at a Hughes Market in California. The woman had a laundry basket full of coins and a four foot high bottle full of coins as well. Her bank had referred her to the Coinstar machine. After finishing the transaction, the woman expressed her gratitude to Coinstar's field engineer and explained to him that the new-found money would help her family have a "very Merry Christmas". She explained that recent financial strain due to the upcoming wedding of one of her daughters and the current college enrollment of her other daughter had shrunk the family's holiday budget. This extra cash would allow her family to afford many of the expenses traditionally associated with the holidays.

Saving 11 months of Development time

Integrating the Coinstar network with a Microsoft Windows-based accounting system eliminated the need for a large-scale custom application—saving 11 months of development time. The custom application previously used by Coinstar to summarize these transactions was becoming too slow and replacing it would have been a one-year development project.

Instead, the company took advantage of the powerful integration tools and accounts payable functionality offered by the Microsoft Great Plains Business Solutions eEnterprise accounting system to eliminate the great majority of that work. As a result, Coinstar spent only one month writing a custom payable generator and then used the eEnterprise Integration Manager module to move the summarized transactions into the accounts payable module. Coinstar has already demonstrated the ability to pay partners within one or two business days while scaling up to 36 million consumer transactions per year.

"The ability to easily integrate with a high-powered accounts payable system eliminated the need to develop similar functionality on our own, saving almost a year in development time," said Jim Doak, director of business systems development for Coinstar.

Handling 100,000 transactions per day

When a customer places their coins into a Coinstar machine, the machine generates a voucher. The supermarket in which the Coinstar machine is located must immediately cash that voucher for the customer and then wait to be reimbursed by Coinstar. The company's agreements with its supermarket partners typically specify that they be reimbursed shortly after the money is paid out. With 100,000 transactions taking place per day, this is one of Coinstar's major challenges. In the past, the store partners were reimbursed only after the coin machines were emptied by an armored car service. This approach meant that in some cases a week or more might pass before the supermarket partner was reimbursed for the voucher it cashed. It also required a considerable amount of manual calculations and data entry on a daily basis.

Today, each of the company's 9,000-plus machines is connected to a dial-up network that phones in a complete listing of Coinstar's transactions every evening. More recently, Coinstar used a custom application built in the Lotus Notes environment to summarize these transactions by store chain and determine the amount that must be paid to each chain. The problem with this approach was that as the company's volume increased, the previous system was bogging down to a point where it would soon become impossible for Coinstar to meet its payment guarantees. Another problem was that the company was faced with the burden of maintaining a separate system.

Doak had the insight that helped solve both of these problems when he recognized that the custom application was in essence an accounts payable system. While the requirements didn't exactly fit an accounts payable mold, Doak felt that with limited development the transactions could be grouped and imported into an accounting system and handled just like any other payable. The challenge that remained was how to bring those transactions into the accounting system on a daily basis with little or no manual effort. Fortunately, the eEnterprise system that Coinstar was already using had a module that was able to integrate data from virtually any database or desktop application. To verify the accuracy and integrity of that external data, the eEnterprise Integration Manager module encapsulates eEnterprise business logic within a series of business objects. All external data is processed through these business objects, ensuring that only data that meets eEnterprise-processing criteria will be committed to the database. Unlike database-level integrations that are susceptible to changes in table structure during a product upgrade, integrations defined through Integration Manager will continue to work with each product release.

Developing the new application

Working with Microsoft Great Plains' business partner, The Resource Group of Renton, Washington, Doak scoped out a new application which reads the transaction information from the Microsoft SQL Server tables in the early morning after the data is phoned in. The application then generates summary data and populates a new table. "The Resource Group helped us determine what we could and could not do through their deep understanding of the application," Doak said. The integration process was simplified by the fact that eEnterprise Integration Manager presents eEnterprise data objects as fields with the same descriptive names as in the user interface, providing a familiar reference with which to define the integration. A Coinstar programmer used drag and drop tools to map fields in the eEnterprise business object with fields in the data source. The programmer also used the processing rules contained with eEnterprise Integration Manager to modify the data in several cases. The entire process of developing the external application and integration took only about one month, far less than would have been required to develop the complete functionality outside of the accounting system. Besides saving upfront development time, the new approach has significantly reduced maintenance costs since minimal functionality is required in the external system and there is no need to change the external system when the accounting system is upgraded. Additional time savings came from eliminating the need to manually enter summary entries from the external system into the accounting system each day.

Now a revenue accountant comes in each morning and balances the generated payables back to totals from the source data. Then they run the process in eEnterprise that integrates the transactions as payables. The accounting software creates invoice numbers and due dates based on the supermarket partner's negotiated terms. Each day, after payables have been integrated, a treasury accountant easily pays the company's partners with an automated clearing house (ACH) transaction by using a customization to the check writing routine that generates an input file for the ACH software. A key advantage of this

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Name: Jim Doak
Title: Business Systems
Development Director
Company: Coinstar

approach is that the information is integrated with the company's primary accounting system so it can be queried and reported on using the same tools that are used for other financial functions.

The Integration Manager module has also simplified communications with the company's property tax software, which is critical because Coinstar operates machines in hundreds of different taxing jurisdictions and must file property tax returns in each of them. The tax department uses property tax management software to track the company's machines and file the necessary reports, then generates a text file which is read into eEnterprise using eEnterprise Integration Manager. With employees in 45 states and the District of Columbia, the company also integrates summary information from their payroll system again with eEnterprise Integration Manager. The most recent improvement is one that allows Coinstar to run its share of each transaction through the accounts receivable system.

Poised for future growth

Since the new application was implemented, it has demonstrated its ability to scale at far higher transaction volumes than the previous approach while reducing payment times. With about 36 million customer transactions in the previous year, the company is working with a Microsoft SQL Server table with more than 100 million rows. These transactions involved processing more than 98 billion coins, worth \$3.8 billion. "As we have grown to handle these enormous volumes, our new approach with the machines writing each transaction to SQL Server and the light external custom application feeding eEnterprise has worked beautifully," Doak concluded. "Putting nearly all the functionality into packaged code that is maintained by external vendors and using eEnterprise Integration Manager to handle the communications between applications has allowed us to obtain the ultimate in performance and functionality while minimizing the amount of time that we have to spend on development and maintenance."

For more information about Microsoft Great Plains Business Solutions, visit www.greatplains.com

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