Enhancement of an electronic payment processing application for a leading card-based financial solutions provider

Highlights

- In order to minimize operating costs from retail payment processing, the client wanted to develop an electronic payment network with significantly lower processing cost compared to traditional networks.

- Due to our strong and ongoing relationship with the parent company, the subsidiary engaged UST to develop a portion of its payment processing application, enhance other areas, and then maintain the system.

- UST developed the Payment Engine which is the core of the system.

- Through enhancements of the previous system, UST was able to reduce the response time of the Enrollment Engine by 90%, while also improving the user interface and page design.

Profile

Our client, a subsidiary of a Fortune 50 retail giant, is the market leader in card-based financial solutions. Propelled by the strength of their products and distribution network, the client is now one of the largest provider of third-party prepaid cards with a reach of over 165 million consumers each week in the U.S. and Canada.

Business Issue

Retailers (including the client's parent company) allow consumers various payment options. These include check, cash, credit, EBT, gift card and debit. Each type of payment incurs various associated costs such as interchange charges, payment processing fees, and in some cases, handling charges. These fees are set by banks, processors and networks and have historically been out of the control of merchants. Over the last few years, payment fees have increased dramatically and with more and more consumers switching to electronic forms of payments, merchants have seen dramatic increases in overall payment costs.

These cost increases not only hurt merchant profit, but they lead to higher costs for consumers. For example, the parent company processes more than 800 million transactions annually at an expense of millions of dollars each year. In order to minimize these operating costs, the parent retailer wanted to offer its customers a form of electronic payment which had a significantly lower processing cost. It also wanted a solution that would work for other retail partners and vendors. It decided to create an independently-operated, merchant-centric payment network with the ability to process various payment transaction types for its partners and vendors. Using this in-house system, the client could process transactions and take a small fee for each transaction.

The company estimated that 25% of its transactions could eventually run through the system. This equates to 220 million transactions at the parent company alone. When the network is made available to other retailers, transaction and customer count will increase dramatically.

UST Global Solution

Due to our strong and ongoing relationship with the parent retailer, the subsidiary chose to partner with UST Global℠ (UST) to develop and enhance portions of the payment processing application, and then maintain the system.

Development and Enhancement Phase

During the development and enhancement phase, UST had to ensure that the system was compatible with the existing enterprise architecture as well as ensure compliance with various security, privacy, storage and legal requirements and regulations.

Apart from testing and providing support to the payment engine, which is the core of the system, UST enhanced the following components:

1. *Enrollment Engine:* This module was coded using a framework called Cocoon, a rarely used technology. Since the original system developed by an earlier vendor was very slow and received customer complaints on the response time, UST redesigned the component and developed it in a Struts framework. The performance improvement due to this was dramatic. UST reduced the response time by 90%, while also improving the user interface and page design.
2. *Administration Engine:* Enrolled customers were managed with an administration engine. UST made enhancements to this section to make it more user-friendly and easier to use. More options to search for customers and view details were added, including the history of changes made since enrollment.
3. *Settlement Engine:* Since third-party agencies handle the settlement of customer payments, our client sends flat files, which include all the transaction details for the day, to these agencies. UST provided valuable design improvements to make this process more reliable. For instance, we added a provision to receive and process acknowledgement from the third-party agencies and included summaries of the files so that any mismatch could be easily identified.
4. *Report Engine:* UST added almost 60 new reports to this module and modified some of the existing reports to make it more valuable for the users.

Maintenance

In addition to providing support and upgrades for the system, UST had to ensure that the system would be scalable to support an increase of up to 100% in claims and users. In order to provide optimal business performance, UST was asked to ensure that:

• The network has 99% uptime with a maximum of 30 minutes for the recovery process.
• There is a three-second response time on transactions.
• The system could support up to 5,000 concurrent users.

Benefits

The program, for which UST maintains the system, generated cost savings and earned revenue:

• By migrating customers to the new payment system, the client expects to save roughly $15 million in transaction costs in the first year.
• By lowering retailer processing costs as partner retailers use the new payment network, the client expects a positive impact on revenue.