Symphony helped a US based ISV to build a plug-n-play .NET based payment-processing interface and integrate it with their flagship ERP software resulting in enhanced e-Commerce capability of the product.

The Client

The client is a US based award winning ERP software vendor providing fully integrated business software to small and medium businesses and divisions of large organizations in retail, wholesale/distribution, and e-commerce. For the past 15 years, they have helped over 3,000 small and medium businesses worldwide to manage every function of their business more effectively.

The Challenges

The existing in-built payment-processing module of the flagship ERP product required customization every time the third party vendor upgraded their payment gateway interface or whenever the client introduced a new version of the flagship ERP product. This process was quite complex as the changes had to reflect across multiple versions of the ERP product and laborious. Frequent customization of the payment-processing module also resulted in poor product maintenance and increased cost by engaging additional resources.

Further, the payment-processing module offered limited and rigid payment gateway connectivity resulting in low adoption by end-customers. The immediate need of the client was to improve the payment-processing module configuration at the highest user level in a simple and secured way, and allow flexibility to add new payment gateways.

The Solution

Symphony's solution to the client included designing an extensible architecture to develop a plug-n-plug and improved payment-processing interface compliant to PADSS using .Net technology. The highlight of this engagement was to integrate the .NET-based interface with Delphi-based ERP product, using Windows

Product Development and Integration

Platform
Microsoft .NET

Industry / Domain
ERP for Retail, Wholesale/ Distribution with e-Commerce

Engagement Key Points
- Project duration – 6 Months
- Ramp Up Time from SOW sign off – 15 Days
- Peak Team Size – 3
- Engagement model – Time & Material
- SDLC – Agile
- Release cycle – short iteration cycle

Technology and Tools Used
- .NET
- Visual Studio 2008
- Sql Server 2005
- NUnit
- ReSharper
- XSLT
- WCF (to communicate with Delphi application)
- PayFlowPro
- PcCharge
- PayMover

Major Product Features
- Supports multiple payment gateways
- Simplified payment gateway configuration at the highest user level
- Bridged the differences between disparate payment gateways and multiple versions of the ERP product
- Faster transaction processing time - Benchmark transaction time of less than a second to process multiple payments concurrently

Communication Foundation.

The payment integration server addressed the payment requests from the ERP product by processing it into a canonical format and mapping the request/responses to the respective payment gateway specific format. It also stored the payment gateway related critical information in XML format. This simplified the payment gateway configuration by allowing authorized users to configure only the information specific to a particular payment gateway whenever there was a need to do so.

A smart UI allowed the Admin-users to choose from a set of trusted payment gateways and configure the connection to the desired one. There was flexibility to configure and manage different types of transactions that included credit card transactions, gift card transactions, and PIN-based debit card transactions. Further, for better management of transaction queue, the system allowed to stop processing of new requests on demand.

The relevant transaction details were stored in a central repository for administrative purpose. The system also provided rich reporting options to display different views of records generated of all the transactions processed by the payment gateway and thereby allowing for strong audit trail.

The Benefits

Symphony's technical leadership driven product development achieved the following benefits to the client:

- Reduced product maintenance effort and cost significantly
- Built a future proof payment gateway solution by providing seamless interoperability between .NET interface and Delphi based ERP software