



Symphony helps a US-based ISV to add real-time integration capability to its flagship ERP software with a leading, third-party Warehouse Management Software to bring Supply Chain visibility.

## 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 client anticipated a potential market opportunity to serve the Warehouse segment users of ERP software. Rather than build the complete functionality of Warehouse Management into their ERP software, the customer found it more appropriate to integrate with one of the leading third party Warehouse Management Software (WMS) systems and thereby bring Supply Chain visibility in its ERP software.

## The Solution

Symphony's solution to the client included designing an SOA (Service Oriented Architecture) and developing a multi-threaded Windows Integration interface on .NET Framework for the ERP software to integrate with the third party WMS system. The Windows Communication Foundation (WCF) technology helped bridge the communication between the client's Delphi-based ERP software and the .NET based integration interface.

The integration interface module used Microsoft Windows Services to monitor transactions processed by the ERP software and the WMS system. For each scheduled configurations, the integration interface generated a .CSV file to communicate each outbound and inbound

## Product Development and Integration

### Platform

Microsoft .NET

### Industry / Domain

ERP for Retail, Wholesale/ Distribution

### Engagement Key Points

- Project duration – 3 Months
- Ramp Up Time from SOW sign off – 2 Weeks
- Peak Team Size – 3
- Engagement model – Time & Material
- SDLC – Agile
- Release cycle – short iteration cycle

### Technology and Tools Used

- .NET Framework 3.0
- XSLT
- WCF (to communicate with Delphi application)
- LinQ to XML
- VSTS 2008

### Major Product Features

- New functionality brought end-to-end Supply Chain visibility from procurement and sales order through customer shipment
- Seamless real-time integration between the customer's ERP software and a leading WMS system
- Effective management of Warehouse information while keeping information current in the ERP software and WMS system



transactions such as, items, vendors, purchase orders, shipping address, purchase receipts, stock transfers, sales invoices etc, between ERP software and the WMS system.

A rich user interface of the integration interface module listed all the inbound and outbound transactions, the information about processes and the error details, if any. Admin users had the privilege to view the transactions and control the scheduled service processes to Start and/ or Stop.

Extensive load and performance testing was performed, while the integration interface module was configured to run on fixed intervals with parameters such as volume of data and time taken for processing. This enabled to analyze the performance of the integration interface module with huge amount of data during peak load hours and its capability to recover from any errors that occurred during the process.

This also brought visibility of many advanced warehouse management features such as kitting, serial number and lot tracking, item matrix etc, for real-time stock and warehouse management through the ERP software.

## The Benefits

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

- Robust SOA architecture allowed product scalability with ease
- Addition of Supply Chain visibility to the ERP software enabled the client to serve a new market segment