

Multi-Channel Retail Integration using BizTalk

The Customer

The customer is a US based multi-channel Retail chain. It has stores in 12 countries across Asia and Europe and is the grocery market leader in the UK. They are pioneers in mall-based stores using Point-of-Sale and web channel for their sales operations. With over 800 stores across US and multiple online sales channel generates over 1 billion USD of revenue.

Business Demand

Even though the customer was a pioneer in the retail industry, it was essential that they maintain higher customer satisfaction by accurate sales through all channels, promotions and on-time delivery. As a business strategy, the customer wanted to upgrade their Order Management System, Warehouse Management System and Web Application to cater to the growing change in sales and multi-channel business approach.

They used Oracle RMS (Retail Merchandise Management) and other applications. Demandware and Manhattan were utilized to provide ecommerce and OMS capabilities.

Their new suite of applications required a complex set of integrations that dealt with critical real-time data such as Product Catalog, Price, Promotion, Sales, Inventory, Transfer, Purchase Order, User Provisioning and Sales Audit Posting.

The customer engaged with Focus Systems to provide a seamless integration between the newer solutions.

Project Challenges

Their business-critical integration of Sales Posting had lot of issues leading to the tender differences in Sales Audit application that required huge manual effort of defect fixing, testing and customer support as on-going basis which led to drainage of cost and time.

Key Highlights:

Domain: Retail

Service: Enterprise Integration

Architecture: Message oriented Architecture

Software: MS-BizTalk and MS- SQL Server (SSIS), Oracle, Retail, Demandware ecommerce, Manhattan OMS/WMS.

Engagement Type: Dedicated Team

Duration: 16 Months + Support

Multi-Channel Retail Integration using Middleware

However, the constraint was to make these new set of integrations seamless and without impacting the existing systems and integrations. Another challenge was in the quick timelines within which these integrations should go live along with the latest changes that lined up during these new integrations. While, there were few development plans lined up, we need a strategy for achieving these integrations.

Solution from Focus

Focus onsite and offshore engineering team was involved in analyzing, estimating and building the integration solutions considering the above-said business challenges within the stipulated timeframe and limited efforts. Focus offered a technical solution using existing middleware of BizTalk and MS- SQL Server SSIS for integrating the Oracle RMS to the new 'Order Management System', 'Warehouse Management System' with the ecommerce application.

BizTalk Solution

The automation of potential support process required careful analysis of possible shortcomings in the systems which cannot be avoided. For example, there could be times when the 'Store Day' can be extended beyond the configured job time, such as Thanksgiving, Valentine's Day, New Year and Holiday season. This automation will also allow the user to tweak the failed messages quickly and resubmit them in the defined way.

Also, the integration is built with the swim-lane receive, transform and post the data purely for manual support process which would override the default data and methods by overriding the configuration. This will allow to impact the default business flow yet helping to inject the failed messages in a streamlined manner.

MS-SQL Server (SSIS) Solution:

The customer wanted an out-of-the-box solution that takes care of both data migration and data integration strategy. Focus team came up with the strategy to arrive at the simple solution that suits both DB migration and daily synchronization of data between different systems. With simple updates in the configuration and queries, the same solution would work for daily updates of data that fetches only the data involved. The data Integration were done using SSIS which has the uncomplicated way to configure the Queries, DB Parameters, Page Size of the data volume, etc.

Technical Challenges Resolved:

The following technical challenges resolved during the project execution.

- Integration will be scalable when there are more new systems built around.
- Integration will be scalable when there are growing data volumes.
- The parameters are configurable to avoid making changes in the core business.
- There is a provision in the design that caters to the automation of customer support process.
- The data integration supports mass data volume for one-time migration.
- The data integration is seamless for daily synchronization of data between systems.
- The Integration supports the error notification and recovery.
- The Integration overcomes Product Limitations

Customer Benefits

Our integration solution provided following benefits to the customer.

Cost Effective:

Effective onsite-offshore model with fixed cost.

Improved Maintainability:

Both BizTalk and SSIS integration solutions are designed such that there is optimum configurability to reduce the code changes.

Single Solution for Data Migration and Integration:

Both BizTalk and SSIS integration solutions are provided considering the data migration, daily data synchronization and effective design for the customer support process automation.

Increased User Productivity:

The solution has automation built to handle errors during integration such that there will be notifications followed by manual way of error recovery by handling the failed messages in a swim-lane business process.

Process Adherence:

Focus team could completely document the proposed design solution and get the signoff which helped them to reverse-engineer the solution and track it so that future changes are not people dependent.

Work with us!

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