

Multi-Channel Retail Integration using Middleware



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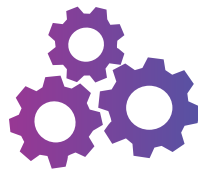
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SYSTEMS
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THE CUSTOMER

The customer is a US based Multi-Channel Retail Chain specialized in music and fashion related clothing and accessories, as well as licensed music. They are pioneers in Mall-based stores using Point of Sales and web channel for their sales operations. With over 800 stores across US and multiple online sales channels they generate over 1 Billion USD of revenue.



THE CHALLENGE



Even though our customer is the pioneer in the fashion apparels industry, it is mandatory for them also to maintain higher customer satisfaction by accurate sales through all channels, promotions and on-time delivery. As a business strategy, the customer wants to upgrade the Order Management System, Warehouse management System and Web Application to cater to the growing change in sales and multi-channel business approach. The customer uses the Oracle RMS (Retail Merchandise System) and suite of other applications.

Demandware and Manhattan are engaged to provide ecommerce and OMS capabilities. The new suite of applications require a complex set of integration that deals with critical real-time data integration such as Product Catalog, Price, Promotion, Sales, Inventory, Transfer, Purchase Order, User Provisioning and Sales Audit Posting. The customer engaged with Aspire Systems to provide a seamless integration between the newer solutions.

THE SOLUTION

In particular, the critical integration of Sales Posting had a lot of issues leading to tender differences in Sales Audit application that required huge amount of manual tasks, defect fixing, testing and customer support efforts on an on-going basis which led to drainage of cost and time. However, the constraint is to make these new set of integrations seamless without impacting the existing systems and integrations. Another challenge lies in the quick timelines within which these integrations should go live with the other set of changes lined up that are dependent on these new integrations. While, there are few development plans lined up, there should be a strategy for making these integrations.

Aspire's onsite and offshore engineering team has been involved in analyzing, estimating and building the integration solutions considering the above-said business challenges within the stipulated timeframe and limited efforts. Aspire has 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, Holiday seasons, Valentine's Day and New Year. 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 to 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 but yet helping to inject the failed messages in a streamlined manner.

MS-SQL Server (SSIS) Solution:

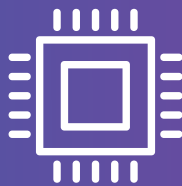
The customer wanted the out-of-the-box solution that takes care of both data migration and data integration strategy. So, Aspire came up with a strategy to arrive at the simple solution that suits both DB migration and daily synchronization of data between different systems. With simple updates in the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

Aspire has 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.

TECHNOLOGY SNAPSHOT

The following technical challenges were resolved during the project execution.

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



Message Oriented Architecture

MS-BizTalk and MSSQL Server (SSIS)

Oracle Retail

Demandware ecommerce

Manhattan OMS/WMS

THE BENEFITS

At the end of the implementation, the integration solution provided following benefits to the customer.

- ➡ **Cost Effective:**
Effective Onsite-Offshore model on a 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 in for little error-prone integration such that there are notifications and manual way of error recovery by handling the failed messages in a swim-lane business process
- ➡ **Process Adherence:**
Aspire team could completely document the proposed design solution and get the signoff which help them to reverse-engineer the solution and track it so that future changes and are people dependent.

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ABOUT ASPIRE

Aspire Systems is a global technology services firm serving as a trusted technology partner for our customers. We work with some of the world's most innovative enterprises and independent software vendors, helping them leverage technology and outsourcing in our specific areas of expertise. Our core philosophy of "Attention. Always." communicates our belief in lavishing care and attention on our customer and employees.

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