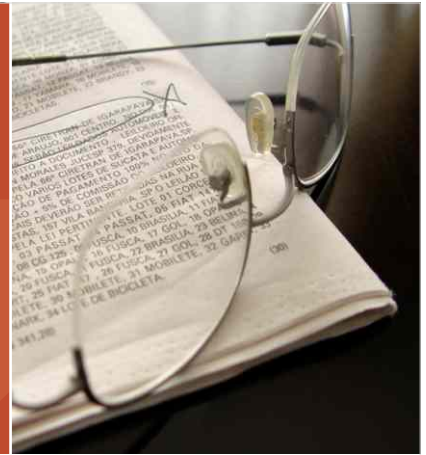


Case Study

Boosted revenues for iconic American Retailer



➤ CUSTOMER

A premier US-based retail chain with revenues exceeding US \$ 25 bn. The chain operates more than 850 department stores in the US, besides their online properties. The stores specialize in retail clothing, accessories, cosmetics and furniture, among other things.

➤ THE REQUIREMENT

The customer wanted to build a Partner Services Platform for each of their online retail properties, which cater to two different market segments. This Partner Services Platform was to become a gateway application for the customer's partners, and all catalog and promotional information would be sent through it.

They also wanted to build Partner web services to expose their catalogs as web services.

➤ THE SOLUTION

Aspire Systems was the main development team involved in designing and building both their Partner Services Platforms, which generate more than \$100mn in annual sales towards the total sales of \$1bn from the customer's online properties.

By integrating all third party retail stores (Amazon, MSN, Google etc.), advertising and other partners (like Linkshare and BazaarVoice), the Partner Platforms result in better reach, visibility and manifold increase in revenues for our customer. As it was also designed to scale up, the PSP allows the retailer to add more partners whenever required, thereby boosting its growth potential.

The Rest-based Partner web services that were built by Aspire are utilized by the product-finder application for the retailer's customer-facing website. Aspire also provides critical production support and testing services for the customer, on a long-term basis.

➤ TECHNOLOGIES

- Java 1.6, Spring 3.0, Hibernate 3.3.0
- Java Persistence API, Java Messaging Service
- Ehcache 1.7.2, Quartz 1.5.2, REST, JAXB
- Hudson, Maven, Liquibase
- JUnit 4.1.x for Annotation Based Injection
- Databases: DB2 9.7, Postgres 8.1.3
- JBoss 5.0, Eclipse 3.2, TOAD

Partner Platform - Retailer's largest online site

Stores from which info comes (sources): 800+

Job processes: Over 200 jobs running daily across multiple applications

Data processed everyday

Products: 100,000+ (per partner)

Categories: 32,700+

Product-Category relationships: 8 million

Store level inventories: 30 million



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Partner Services Platforms – Gateway application

The Partner Services Platform envisioned by our retail customer was to be their gateway application for all partners, which would control all data going to and coming from any external party.

- All catalog/promotional/inventory data are sent to multiple partners or affiliates through the Partner services platform
- Responses coming back from partners are validated through the gateway application and passed on internally
- Data is sent in the form of feeds to partners, and each partner receives only the specific information they need
- Feeds are customized and sent in the format preferred by the partner (csv, xml, tsf, text etc.)

Interestingly, Aspire built the Partner Services Platform twice – for each of the major online properties of the customer. This was because each online website was a different brand of the customer – catering to different market segments – and with different partners, business rules and data.

We designed and built the gateway applications using Spring and Hibernate.

PSP Implementation

The Partner Services Platform has three main backend processes: Synchronization, Recalculation and Publishing. Aspire built all the applications required to collect daily updated data from every available data source, process the data according to the business rules for specific data sets and publish the data in the relevant format.

Synchronization: Product Catalog data is collected from various data sources within the retailer on a daily basis (it is consolidated from all their 850+ physical stores, warehouses and online stores - data is stored on an Integrated Data Management server, and on their DB2 and Postgres DB servers). Inventory data from the same sources gets updated every 10 minutes. The application to perform this synchronization was built from scratch in Java, by Aspire.

Recalculation: Each of the retailer's partners would need data specific to their purpose (for example, some of them would need catalog data, location-specific data, product data, sales and commission data and so on). When processing the data to be sent for each partner, specific business rules are applied to them – eligibility criteria, filters, data mapping etc. In certain cases, costs, metrics, commissions etc are calculated for a partner; these reconciliation processes involve even more complexity.

Publication: This involves the presentation layer, where the final feed files (after synchronization and recalculation) are created in the format required by each partner. These files are then typically pushed to the partner's FTP location, unless the partner prefers another means of receiving the information.

Partner Platform - Retailer's other major online site

*Stores from which info comes: 40
Job processes: Over 200 jobs running daily across multiple apps*

Data processed everyday

*Products: 460,000
Categories: 7000+
Product-Category relationships: 2 million
Store level inventories: 1 million*



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Retailer's Partner Services Platform



Aspire built the Partner Services Platform twice – for each of the retailer's major sites - because each site/brand had different partners, business rules and data.

Examples of how the PSP (represented above) works: The retailer sends its catalog and promotional feed to retail partners like Google Stores, Bing etc., through the PSP on a daily basis. Order information, cancellations and so on are sent back to the retailer as a feed as and when they happen. Similarly, Bazaarvoice - a user review website, is another partner, to whom the retailer's catalog feed is sent through the PSP. User reviews of products are then sent back by Bazaarvoice through the partner platform.

Virtual store on Amazon

When our retail customer entered into an agreement with Amazon for a virtual store, Aspire was responsible for publishing of feeds to and from Amazon 24*7.

Every 10 min, inventory/availability details from internal sites and data sources would be updated and this information was published to the retailer's virtual store on Amazon. Order fulfillment and any cancellations from the virtual store at Amazon were sent to the customer's inventory system through the platform built by Aspire for the same.

Partner Web services app

This was a very critical Rest-based web services application that Aspire developed. It exposes the retailer's two main websites' catalogs as web services.

These web services are utilized by the product-finder application for the retailer's customer-facing website. Additionally, any partner of the retailer wanting certain information could pull the relevant information through the appropriate web services.



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Key Benefits

- The gateway applications developed for the retailer are quite robust and have performed well to support multiple partner feeds
- Delivery of partner feeds are in accordance with strict SLAs, and the feeds drive traffic and in turn revenue to the retailer's websites
- The Partner Services Platforms handle a huge amount of data, and it can also scale easily. This allows continuous addition of new partners and in turn increases the reach, visibility and revenue of our customer
- Aspire handles production support for the customer 12*7. Production jobs are monitored real-time and any issues with respect to hardware or the network are taken care of in real-time. This significantly reduces the impact of system failures/down-time
- Aspire's support team is also the single point of contact for the customer's partners for production issues
- Since the retailer's software development cycles are in accordance with their shopping seasons, and there are peak/lean times, Aspire offers flexible Ramp up/down of the team based on their requirements

*Aspire handles production support for the customer 12*7. Jobs are monitored and taken care of in real-time; this significantly reduces the impact of system failures.*

ABOUT ASPIRE

Aspire Systems provides end-to-end software development services to Independent Software Vendors (ISVs)/packaged software providers, Software-Enabled Businesses and Innovative Enterprises.

We are passionate about **Producteering™** – our approach to creating software better and faster. It helps us deliver tangible business results for our customers through technology. Our key strengths are in the areas of SaaS, Web 2.0/RIA, Mobile, Test Automation using Agile/Scrum methodologies.

For more information contact:

Website : www.aspiresys.com
E-mail : info@aspresys.com
Tel
USA : +1-408-260-2076
UK : +44 203 170 6115
India : +91-44-6740 4000

