

# STORELABS BUILDS CLOUD HOSTED AS2/EDI – FTP/XML GATEWAY FOR THE RETAIL INDUSTRY USING ULTRAESB



**UltraESB**



# quick facts



Customer	Storelabs
Industry	Marketing / Retail / Innovation / Mobile / Retail
Challenge	Electronic couponing platform with AS2 connectivity, EDI GS1 standard, Retail integration
Solution	AdroitLogic UltraESB
Benefits	AS2 out of the box, ESB with multiprotocol integration capabilities, Ease of use, Very low footprint, High scalability



## background

Storelabs is a StartUp company focused in Innovation Solutions identified by a strong technological background and field/operations expertise. Storelabs is specialized in FMCG/Retail marketing and operations but it also covers many other fields including eCommerce, HealthCare, Maintenance, Home Automation, Security, Insurance, etc.

The product portfolio contains mobile/cloud centric Marketing solutions (mWallet, mCoupons, mCommerce, mLoyalty, social and location Marketing) but also covers mHealth, marketing campaign and field management systems.

## challenge

Storelabs was requested to provide an Electronic Couponing Platform for HighCo Data Spain (Spanish Branch of HighCo Data Group). The proposed solution 'Nuron' had to follow the GS1 EDI Standard for Couponing Automation at the Point of Sale, and Carrefour Spain was chosen as the first retailer to be integrated.

The platform provides electronic support for the couponing activities of publishers (FMCG manufacturers such as P&G, Heineken, Nestle, Kellogs, Johnson & Johnson, among others) using HighCo Data coupon clearing services. This includes campaign publication, coupon scanning and automatic validation at POS against product, sales report, audit reconciliation and electronic payment clearance, all supported with standardized messaging.

The use of UltraESB allowed to provide a much more innovative solution, replacing the classical EDI approach (message station, file integration, translation and synchronized tasks to control the flow) with a much more powerful approach and many connectivity capabilities of new communication channels such as AS2 to S/FTP based partners, and RESTful and SOAP web services for internal integration with additional systems. It also allows direct conversion of messages between different formats, including EDIFACT to/from XML in a very scalable platform specifically designed for high volumes of transactions and very low footprint in resources.

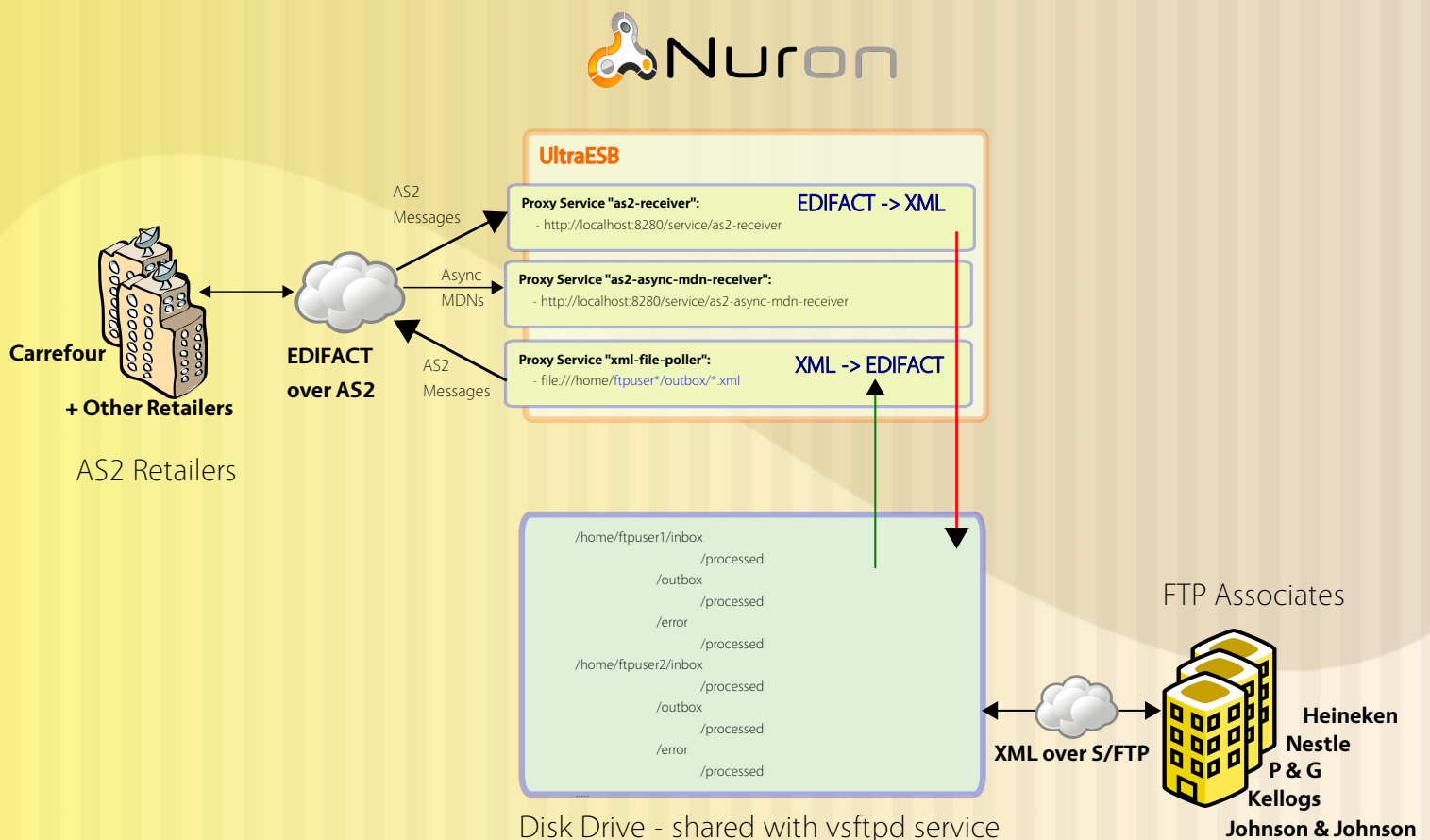
# solution

Storelabs carried out a market research looking for the most suitable State of the Art ESB, AS2 and EDI platforms that could scale in a short term to support very high volumes of transactions, and could easily accommodate additional/custom connectivity channels, flows and provide a more flexible integration with existing web platforms that needed the connectivity of EDI/AS2 systems, but without the complexity of such systems.

UltraESB was chosen among many solutions due to the native support of AS2 and the ability to convert between different transport protocols and message formats, its low footprint and proven scalability.

UltraESB, an Enterprise Service Bus (ESB) provides the core back-end functionality required for the new integration platform, and also offers the possibility to use RESTful and SOAP web services with several authentication schemes, and thus was considered a future proof warranty for further developments.

Storelabs approached AdroitLogic to request support for a Proof-of-Concept implementation for the conversion of a the GS1 Coupon UN EDIFACT messages over AS2 to XML messages and delivery over S/FTP. The POC solution was quickly extended thereafter to include all scenarios, and AdroitLogic also provided assistance on hosting the solution on the Amazon EC2 cloud, as well as provide support during AS2 integration testing and GS1 certification with Carrefour Spain.



The solution defines ESB Proxy Services to accept and send out AS2 messages and asynchronous MDNs with trading partners. Incoming AS2 messages are received over HTTP/S. Once the credentials are validated and the ultimate FTP associate for the target message identified, the incoming UN EDIFACT message is converted into a XML message, and written to the FTP inbox of the target associate.

A periodic service polls the FTP outboxes of each FTP associate, and for any outgoing messages, transforms the XML payload into a UN EDIFACT message, and sends it over to the AS2 retail partner. This system provides an abstraction layer for communication between the GS1 standard and the different systems integrated for each of the parties, where different information formats and connections are used.

## deployment

The system was designed for a Cloud based deployment over the Amazon EC2 cloud using an Ubuntu based Linux system. While Carrefour and other top retailers connect to it via AS2, other non EDI heavy users and trading partners such as HighCo Data would connect via S/FTP to reach AS2 partners using more flexible XML messages. The vsftpd daemon is used to host the S/FTP connectivity, and shares a common disk with the UltraESB.

Storelabs introduced an additional requirement: the system had to work on the smallest instance provided by Amazon to take real advantage of the small footprint of the ESB, but keeping the high volume of transactions. This was successfully accomplished with some fine tuning of UltraESB and tested in the real environment.



## future

As a result of this project, AdroitLogic and Storelabs have established a partnership to work closely together providing services and solutions related to AS2 trading and EDI processing for Retail industry clients, and also recognizes AdroitLogic as a valuable technological partner involved in Storelabs platforms.

Storelabs conceived and designed the architecture of the presented solution in the scope of a much larger system that relies on UltraESB for orchestrating an extremely high volume of transactional validation and authorizations in a system that will handle millions of consumer requests each year in a mobile loyalty/couponing solution.



## about highco

Operating in 13 countries across Europe, HighCo is the leading non-media communications group specialized in mass-market retail and consumer goods. Through its two complementary divisions, Shopper and Data, HighCo connects the consumer all along the customer path, implements promotional campaigns and analyses and processes data.

**Connect Shopper:** couponing, promotion, in-store media, services

**Process Data:** Clearing, fulfilment, monitoring, logistics

HighCo Employs nearly 1,000 staff members in France, Benelux, Spain, United Kingdom and Central Europe and is listed in compartment C of NYSE Euronext Paris

## about adroitlogic

AdroitLogic Private Ltd. is a privately held, innovative technology company based in Singapore, that believes in, and proves, that better design and clever code yields much better software. AdroitLogic is driven by an exceptional team of integration experts with many years of ESB development experience, backed by the dedication and commitment of its founders, who are personally involved with the design, development and support of its products.

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