

# E-Commerce orders integration with WMS order fulfilment solution through message driven middle layer

## About the Client:

The client provides an integrated suite of mail, logistics, and retail solutions in Singapore and the Asia Pacific region. The client has three main business areas:

- Mail business
- Logistics business
- Retail business

The company has been expanding their business from a postal service to a service provider of third-party logistics and e-commerce. Cybage has been the key contributor in business consultancy and building technology solutions for their rapid expansion plan.

## Business need:

- Integration of e-commerce websites with backend WMS/ERP systems for e-business.
- The e-commerce websites were built with Magento, BigCommerce, Vend, Shopify, EzyFulfillment, Amazon Web Services (AWS), and other custom built web stores.
- The orders from these websites were submitted to the client back-office system for fulfilment, mainly to the Warehouse Management System (WMS).
- Every time a new e-commerce website was added for hosting, a lot of effort was required to connect it to WMS, leading to scalability, extensibility, and go-to-market turnaround time issues.
- Requirement was of a generic middle layer, which could reduce the rework required due to endpoint changes, and could also support scalability for supporting future growth.



## Solution offered:

- Developed middle layer for interaction with e-commerce websites and WMS.
- E-commerce websites called the middle layer interfaces with data payload. The payload could be in any format.
- The middle layer formatted and transformed the payload into a standard data format and submitted it in the message queue for further processing.
- The middle layer service core read the messages from the message queue and processed them based on service configurations.
- The service configuration managed the transformations required for various sites, payload formats, transformation formats, and destination warehouse where the payload should finally go, among others.
- The WMS called the respective middle layer services to provide the data back to the e-commerce website.

## Business impact:

- Quick integration (by avoiding rework) of new e-commerce websites with the WMS through Middleware.
- Improved go-to-market turnaround time.
- Scalability for supporting future growth.
- Feasibility in terms of various payload formats supported.
- Various communication channels supported (API/file share through FTP).
- Configuration-based system, thereby, providing ease of maintenance.