

CASE STUDY

“PROWESS HELPED LOGISTICS MAJOR TO STREAMLINE DATA INTEGRATION AND API CONNECTIVITY”

INTRODUCTION:

Our customer is a transportation, trucking, and railroad technology company that focuses on enabling importers and exporters to optimize their freight operations. To achieve this, our customer needed to overcome various challenges related to data synchronization, cross-technology communication, and API connectivity. They selected MuleSoft and Anypoint Platform as their solution to address these challenges and enhance their organizational technology architecture.

CHALLENGES:

1. Integrating multiple delivery orders (DO) with different customers that arrive in various formats such as CSVs, Excel documents, and PDFs.
2. Lack of a unified integration solution resulting in manual processes and data inconsistencies.
3. Limited real-time updates and lack of proper integration with Container Workflow Management (CWM) system, which serves as the source of truth for transport transactions.
4. Dependence on third-party tools like Babelway for data transformation from PDF format to CSV
5. Inexperience in data mapping and the need to adopt industry-standard formats for improved interoperability.



PROWESS SOLUTION:

To overcome the challenges mentioned above, our customer implemented the following technical solutions using MuleSoft and Anypoint Platform:

1. Data Integration and Transformation:

- MuleSoft integrates DOs from different customers, regardless of the format (CSVs, Excel, PDFs), into a standardized JSON format for ease of processing.
- The transformed data is seamlessly synchronized with the Container Workflow Management (CWM) system, ensuring accurate and consistent information.

2. **Industry-standard Formats:** Prowess assisted in transitioning from CSV to industry-standard formats for better compatibility and integration with partner systems.

3. Communication with Shipping Partners:

- Container Workflow Management (CWM) leverages Google Cloud's topics to publish messages containing updates to shipping partners.
- MuleSoft connects to these topics, retrieves the data, and performs the necessary transformations.
- The transformed data is sent to shipping partners through various integration methods:
- EDI X12 204 document: The data is transformed into this format and sent to Blume.
- API Call: An API call is made to Domestic Shipping Partner, sharing the relevant information.
- API Call to Ocean Logistic Partner: In the case of waterway transfers, an API call is made to Ocean Logistic Partner, facilitating seamless data exchange.

4. Webhook Integration with Shipping Partners:

- MuleSoft APIs listen to webhooks from partners for any shipment event updates.
- The received data is translated into the CWM format and transferred to the Container Workflow Management (CWM) system.

5. Development of APIs:

- Prowess collaborated with the customer to design and develop APIs that streamlined the entire delivery process. Our team facilitated the migration process and built APIs to automate data transfer and synchronization between systems

6. **Real-time Updates:** Prowess ensured that all shipping events, vendor events, and updates were captured in real-time and reflected in the CWM system, which acted as the source of truth.



BENEFITS AFTER IMPLEMENTING THE SOLUTION:

1. **Improved Data Integration:** The integration of different delivery order formats (CSV, Excel, PDF) through APIs and the use of MuleSoft facilitated seamless data integration, eliminating manual processes and reducing errors.
2. **Real-time Updates:** The implementation of APIs enabled our customer to receive real-time updates from shipping partners like Domestic Shipping Partner, Ocean Logistic Partner, and others, ensuring accurate and up-to-date information in the CWM system.
3. **Enhanced Efficiency:** Automation of the delivery process through API connectivity and the elimination of manual data handling improved operational efficiency.
4. **Increased Scalability:** The use of Anypoint Platform and API-led connectivity provided a scalable and flexible architecture, allowing our customer to accommodate future growth and easily onboard new partners.
5. **Interoperability:** By adopting industry standard formats and establishing seamless communication channels with shipping partners, our customer improved interoperability and collaboration within the transportation ecosystem.

CONCLUSION:

By implementing MuleSoft and Anypoint Platform, our customer successfully addressed the challenges related to data integration, synchronization, and communication with shipping partners. The API-led connectivity approach enabled to establish robust and scalable technology architecture, facilitating automation, efficient operations and enhancing customer satisfaction.