ENABLED DIGITAL TRANSFORMATION WITH AWS FOR A GLOBAL DATA STANDARDS COMPANY

Built the Message Exchanging platform for end-to-end insurance lifecycle automation to resolve data demand and process inefficiencies.

Client Background

A global data standards organization faced challenges to meet the demand of growing data volume and needed a solution to automate end-to-end insurance lifecycle and eliminate process inefficiencies. The need was to build a next generation Digital Message Transformation and Orchestration platform that ensures real-time message validation, transformation, orchestration, and conversion to client's standard formats. A single processing engine for all insurance industry-relevant messages irrespective of the exchange type was required as well.

Xoriant Solution | Key Contributions

Xoriant experts improved operational effectiveness by streamlining financial agreements, premium and claims settlement processes through the Message Exchanging platform. We enabled straight-through processing of internal and external messages for bureau and non-bureau business. Through the Message Exchanging platform, we enabled interfacing directly with systems, aligning individual messages with industry processes while centralizing and simplifying workflow.

- **Exchanging implementation to process any type of input-output message**

The platform can receive message in any format and send it to the broker in any other output format. All these configurations can be managed in the configuration area.

- **Created Queuing mechanism using scalable Queuing solution**

The messaging gateway uses a high-performance queuing mechanism to handle large message and document volumes using APIs. This mechanism enables the sender to use different queues to segregate messages by organization, environment, organization and environment, and transaction types. Also, the sender can use dedicated polling mechanisms to retrieve inbound messages.

- **User-controlled transmission of the messages to the destination**

Grouping allows clients to send hundreds of messages related to a group over a time period (60 mins). We offered the client a custom solution using latest technology like
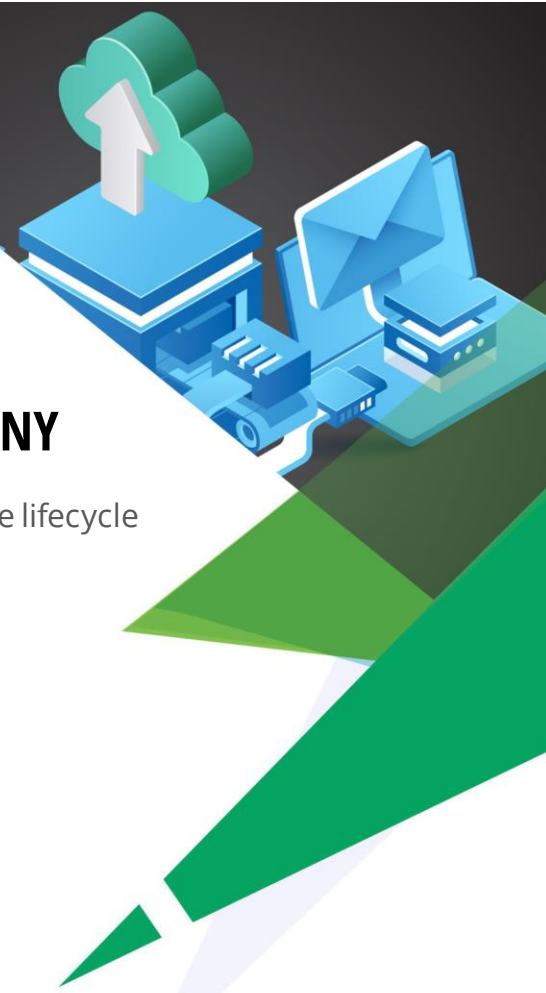
KEY BENEFITS

- Increased hourly message processing from 5000 to 26000. Now, up to 250000 messages with attachments up to 1 GB can be processed in a day using the subscription-based Message Exchanging platform.

- 40% reduced management and infrastructure costs with the solution.

- Reduced development costs for brokers and carriers in client's network, by giving them access to a subscription-based platform wherein cost of new infrastructure set-up is eliminated.

- Supported both peer-to-peer and multi-stakeholder interactions with one or multiple receiver destinations.

Amazon EFS, S3, Redis, MySQL, etc. because it is more sustainable in a multi-tenanted environment. The Message Exchanging platform aggregates all incoming requests and starts processing requests individually post receiving all requests associated to a particular group.

- **Designed Multi-tenant Architecture**

Purging Multi-tenant architecture allowed multiple brokers and carriers to get onboarded on the platform and use the services on a SaaS mode to start sending messages.

- **Provided Custom-built Exception Handling framework**

The mechanism enables users to retry outgoing MIME message for a number of times over an hour. If Message Exchanging platform receives any exception or Soap fault from Receiver, there's an option to configure Retry count and Retry delay dynamically. This implementation is memory-efficient and built using technologies like AWS SQS, Redis, S3, Apache Camel, CXF Interceptors, etc.

High Level Architecture
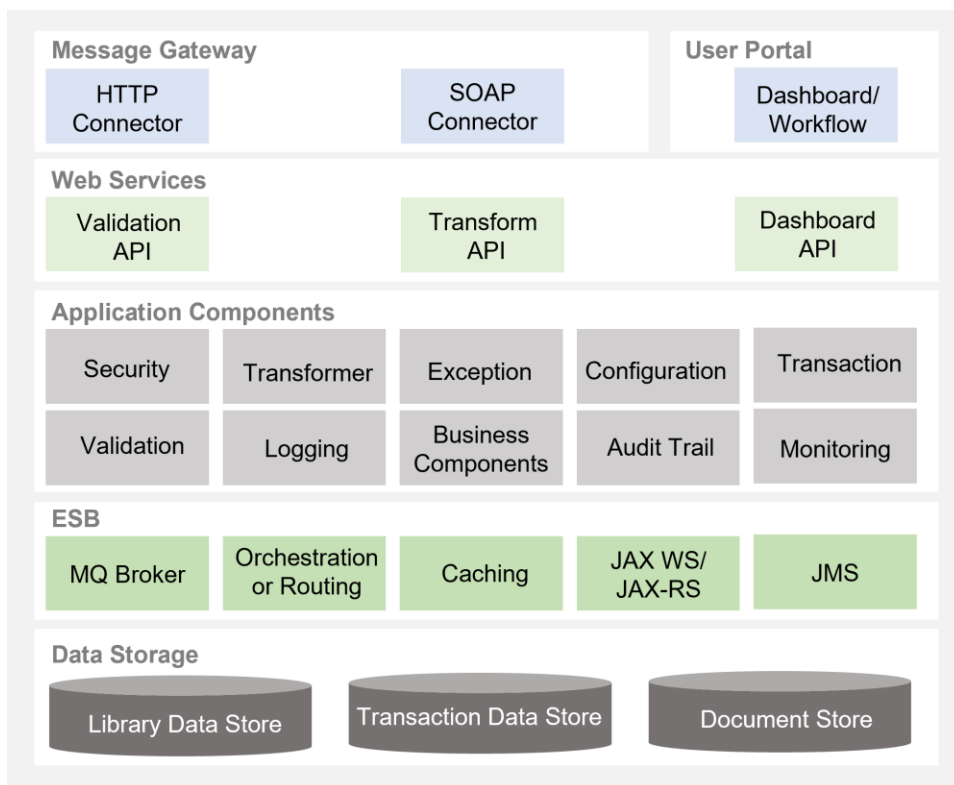
KEY BENEFITS

- Achieved scalability to manage increasing message volumes with AWS.

- Reduced operational costs through back-office data integration and process automation such as routing of messages to receiver, transformation of message based on the receiver type, and so on.

- Enhanced client's insurance-related services through improved speed, quality, and integrity of critical information.

- Enabled effective resolution of client messaging issues with a comprehensive audit trail and reporting workflow.

- Multi-tenant architecture allows users to subscribe to the messaging platform with just one click – From weeks to just a click.

- The custom-built exception handling framework saves the round trip of the brokers and carriers to reprocess failed transactions due to network issue.

Technology Stack

This platform was completely built on a cloud infrastructure using AWS.
Apache CXF Framework (CXF-RS, CXF-WS) | Apache Camel AWS (ECS, Redis, MySQL, Elasticsearch) ActiveMQ | Spring Boot | Java | Angular