Government Agency Case Study

A monolithic, ancient beast

This government agency needed to overcome the challenge of serving an expanding customer base in the face of reduced funding and high demand for cost savings and faster turnaround. Hampered by budget cuts from sequestration, the agency needed to find a more efficient and effective method to meet customer demands for increasingly complex services that supported data voice and video, real-time situational awareness and real-time self-service and configuration capabilities.

The technical environment, as it stood, would not allow the agency to achieve these customer driven requirements. Poor process modeling and misaligned business and data flows meant that, “It took an astronomical amount of time, 26 months, to execute 14 system integration flows using legacy integration solutions such as Oracle SOA Suite,” said the functional lead hired to modernize this government agency’s systems using SOA based principles. “So many components needed to be created and integrated. The legacy system, built on the existing Oracle WebLogic Server and message oriented middleware, an in-house custom built application, wasn’t efficient or easy to use.”

The agency aimed to retire some of their outdated applications to improve and update the technical environment, but many point-to-point integrations had been built in and they had to find a way to loosen existing couplings. To add complexity, every piece of data could live only on-premises, since the agency network does not have external internet connectivity and does not allow for data storage in the cloud. “The environment was a monolithic ancient beast whose function was originally designed for order management and service delivery.”

The team was forced to regularly troubleshoot errors created by Human in the Loop (HITL) interaction that stemmed from convoluted systems and flows that required manual data entry into multiple systems.

“When different business groups inserted identical data that needed to be used cross-functionally into their different tool sets, the smallest typo or data inconsistency broke integrations with downstream systems, causing system outages and frustrating stalls for customer service delivery.”

Modernizing Outdated On-Premises Systems with RESTful APIs

The IT team’s plan was to leverage modern technologies into the agency’s infrastructure to satisfy their SOA initiative. They decided to use clean and simple REST APIs, standard data models and easy decoupling points to integrate legacy system integrations with inherent business value. Since they used four different communication protocols (JMS, HTTP, JDBC and SFTP) from 16 different applications and planned to leverage standardized data models such as UBL, CIQ, MTOSI and OSS/J, the development team would need an ESB.

After considerable vetting of ESB products offered by Oracle, Tibco, Progress, Apache, Redhat and others, the functional lead decided on Mule ESB. To him, as opposed to other ESBs that he had evaluated, Mule ESB offered a development suite that was

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Challenge overview

- Increasing demand for services while budgets were being cut
- Point-to-point integrations and legacy middleware slowed process improvements

Solution

- Streamline data retrieval and synchronize integrations to improve the customer experience
- Use clean and simple REST APIs, standard models, legacy system integrations & easy decoupling points to enable business agility

Results

- 35x more productive, creating 55 new flows a month with the same team that used to produce 2 flows a month
- Significant cost savings of $650,000 per year by replacing several systems with MuleSoft’s Anypoint Platform

intuitive for a legacy based development team to pick up, and a platform approach that would enable him to scale with future agency's needs.

"Following our detailed analysis we felt the best fit for our needs was hands down Mule ESB."

With Mule ESB and Anypoint Platform, this government agency could eliminate the current Message Oriented Middleware (MoM), which facilitated the integration between the CRM System, network modeling system and generated tickets within the service management system. The original effort to create the 14 different integrations took nearly 26 months to have a production ready system that could handle the communication between the various systems. The IT team was able to rebuild these flows using Anypoint Studio's graphical design environment in only 6 months. The development team automated critical business processes for the operations group, eliminating manual steps and reducing process times from hours to minutes, for a 90 percent time savings.

"The platform approach enables us to automate our existing data integration processes. Enriching these new flows with data exposed through Web services and APIs helps us meet the demand for reduced costs and shorter delivery times," said the IT Director. "Using other types of integration tools, this would be unrealistic."

> "On a previous project we had 14 people dedicated to the integration platform. We can do more with Mule ESB in less time, using less than half of the manpower."
>
> -IT Director

More in One

For this government agency, using MuleSoft's Anypoint Platform has generated significant cost savings. They have retired a number of its major systems and tools, including Oracle WebLogic Server, Message Oriented Middleware, flash-based service reporting, SugarCRM and reduce their staffing needs by 2 Full Time Equivalents (FTE). In exchange, the agency can now rely on Anypoint Platform for all of their integration needs not just internally but as they integrate with other agencies.

Cost Savings as a result of Mule ESB:

- $200,000/year on WebLogic
- $450,000/ on 2 FTEs

"On a previous project we had 14 people dedicated to the integration platform. We can do more with Mule ESB in less time, using less than half of the manpower," the IT Director said.

The agency's development team has been able to be extremely productive in the last months since implementing Mule ESB. "We have created over 170 different Mule ESB flows and proxies within our environment in only 9 months. I was blown away at how productive our team had been by simply leveraging this platform."

Moving forward, they plan to build out more event-driven data enrichment capabilities by leveraging the platform to orchestrate the integrations for a multi-vendor Order Management system.

"The agency prioritizes their IT projects, and Anypoint Platform is a key contributor to both the #1 and #2 IT priority projects for the current fiscal year."

The first major release of their top priority IT project was launched in half the time that was originally estimated and ¼ of the time that was spent implementing its predecessor system. They have integrated multiple systems giving them the ability to better serve their customers with a modern, agile SOA platform.

"We rely on Anypoint Platform for modernizing our legacy systems and to help meet our SOA initiatives," said the IT Director "As we continue to scale, we see MuleSoft as a significant contributor to our ongoing priority projects."