NATIONAL APPAREL DEPARTMENT STORE:
INTEGRATION PLATFORM MODERNIZATION

ORGANIZATION

XTIVIA's client is a department store chain, with nearly 300 locations in 16 states offering apparel, shoes, accessories, cosmetics, home furnishings, and wedding registry. With more than 10,000 employees nationwide, their stores and eCommerce site have produced billions in annual revenue and deliver an assortment of fashion brands to their customers.

CHALLENGE

Our client is a leading technology innovator in retail. Mission-critical systems handle high volume and high velocity of data movement from on-premise to cloud with ultra-low latency. The existing data integration tool could not meet its high velocity/low latency streaming requirement. The immediate challenges, which needed addressing were the following:

- Load balancing did not work as expected (i.e., a job can't be deployed in Load Balance mode). It always runs on one server though the job is deployed on two servers.
- Fault tolerance did not work as expected. The job did not failover unless the job server was down. Manual intervention is required to start the job whenever it goes down.
- Multithreading is not resource optimized. Jobs should be parallelized to enable multithreading with a negative impact of very high CPU and RAM consumption.
- It is not easy to share data between the jobs compared with other integration technologies.
- They have a limited number of Cloud connectors for optimizing high throughput messaging in the Cloud.

BY THE NUMBERS:

300 Locations in 16 States

10,000 Employees

3.7 Billion in Annual Revenue (2017)

KEYWORDS

MuleSoft Anypoint Platform, MuleSoft Runtime Manager, MuleSoft Anypoint Monitoring

SOFTWARE

Mule Runtime | MuleSoft Anypoint Platform | MuleSoft Anypoint Monitoring

MuleSoft®

SOLUTION

XTIVIA partnered with this client to provide a complete lifecycle solution on MuleSoft starting from:

1. Proof of Technology on common use cases
2. Environment Setup
3. Development

1) **MuleSoft Proof of Technology:** XTIVIA reviewed our client's existing use cases, data sources, data usage, and patterns, then performed a proof of technology based on the most common use cases:

| Use case	Description	Throughput requirement	PoC Results	Status
Pub-sub (batch)	Integrate on-premise data source with cloud target using pub/sub	60,000 messages/hour (17/sec)	2,000+ message/sec	✅
File transfer	Data format transformation and file transfer	10 tps 1024KB message size	100+ tps?	✅
Streaming	Integrate on-premise data source with cloud target via streaming pattern	2,500 messages/sec normal volume 6,000 messages/sec peak volume	7,500+ tps	✅

NATIONAL-WIDE APPAREL DEPARTMENT STORE:
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SOLUTION (CONTINUED):

2) MuleSoft Environment: As per our client's enterprise security needs, API Gateway was provisioned inside a secure DMZ providing APIs' perimeter security. The integration layer or the ESB was provisioned in the internal network where traffic is routed through an F5. All MuleSoft control planes, such as API Manager, Monitoring Dashboard, and Runtime Manager UI are hosted inside MuleSoft Cloud.
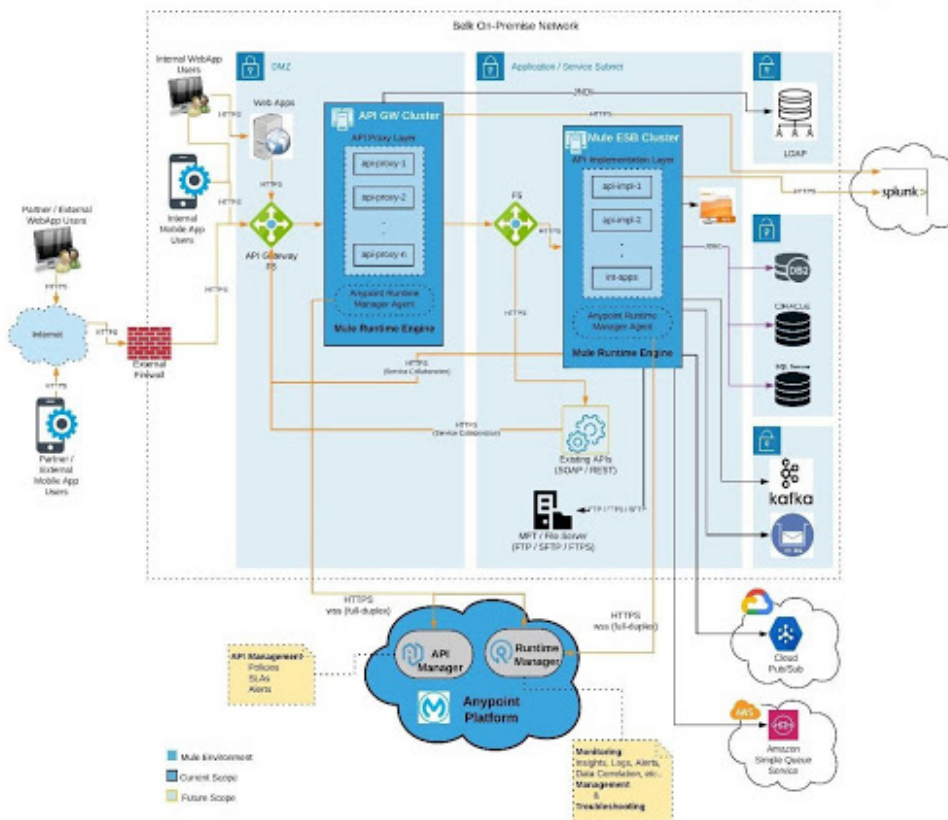
3) API Development: XTIVIA enabled connection between the client's Salesforce Marketing Cloud to IBM MQ and Google Pub/Suborder flow. Next, we ordered movement from on-premise IBM MQ to 4 cloud destination Google Pub/Sub, Azure storage, Google Storage, and NSF shared location. Integrations included Workday to Manhattan Active® Omni item sync, Workday to Lawson order sync, RMS to Chargeback price calculation, and RMS to Manhattan Active® Omni item sync. We then provided MUnit testing to be done for unit testing.

BUSINESS RESULT

The new MuleSoft API platform enabled the client to drive further retail innovation with scale and speed. The result included:

- The ability to deliver curbside pickup during COVID-19 leveraging MuleSoft APIs.
- Omnichannel retailing leveraging multiple cloud SaaS like Salesforce, Manhattan WMS, Chargeback, Lawson
- Truly flexible platform to support the surge of orders in peak seasons.

XTIVIA OVERVIEW

XTIVIA is a proven technology integration and innovation company known for delivering leading-edge technology solutions to our clients' specific requirements, regardless of project complexity. We bring next-level business operations to reality through Application Development, Business Intelligence, Data Warehousing, Database Support & Management, Enterprise Information Management, Digital Experience Solutions and Enterprise Resource Planning. Our success stems from a demonstrated ability to deliver deep expertise via professional services, empowering clients to leverage their chosen technology successfully, competitively and profitably. XTIVIA has offices in Colorado, New York, New Jersey, Missouri, Texas, Virginia, and India. www.xtivia.com