A Global Supply Chain Company Leverages AWS Lambda for Streamlining its Customer Operations

AWS Well-Architected Case Study

Executive Summary

A global supply chain company switched to a cloud-first strategy to enhance customer experience. With Cloud-Native applications they streamlined and automated their key client facing business operations. A mobile version enabled their staff to serve customers on the go. Trigent enabled the company to build a cloud-infrastructure with AWS Lambda in a serverless architecture. A bespoke cross-platform mobile application using React Native with secure API access to the core Cloud Applications ensured safe access for the sales team.

The Challenge

Fragmented infrastructure:

The company has its operations in five different continents. The operational needs of every transaction are unique, and communications are confidential.

Disparate operational processes:

The company aspired to develop a mobile application to streamline and automate the operation of request submission, customer communication, shipment status, to name a few.

High dependence on manual systems:

The manual system to track and manage operations was error-prone with a high turnaround time.

Solution requirements:

The company looked for new technology that could:

1) Provide a versatile serverless cloud architecture
2) Be scalable and cost-effective
3) Support secure APIs that are easy to create and maintain
4) Support a mobile Application that works natively across iOS and Android

About a global supply chain company

The client is a certified Veteran-Owned Small Business (VOSB), a global supply chain company based out of Washington. With 24+ years of experience, the company specializes in Aerial Drops and Delivery, sourcing strategy, supplier verification, quality control, logistics, and warehousing processes for varied freight sources, including ground, sea, rail, and air. The company's turn-key operations include staffing, procurement, austere shipment, contingency/temporary construction, and project management. They also provide guidance on shipping strategy fleet operations, maintenance, and repair parts.

> "We were convinced that Trigent was the best choice to outsource the mobile application development using AWS Lambda in a serverless architecture."
>
> –A global supply chain company

> " Trigent has a history of 25 years of building cloud applications. "

> " The entire process is faster and more robust than ever before. "
>
> – A global supply chain company

Why Trigent

The company desired to drive speed, scale, flexibility, innovation, as well as performance and selected Trigent because of its expertise to develop a cloud-first strategy leveraging AWS capabilities, optimize Cloud infrastructure, build reliable and scalable applications and API infrastructure. Moreover, Trigent's proven track record of building custom software for 25 years and being a recognized AWS Consulting Partner was an added benefit.

The Solution

The company adopted a cloud-first strategy, and they partnered with Trigent to leverage Trigent's cloud capabilities. Trigent's AWS certified domain experts worked closely with the in-house team to develop user stories and wireframes to document the process flow and user experience. Multiple iterations of the wireframes screen flow were done that ensured a superior user experience.

The core applications used AWS Lambda in a serverless architecture. APIs were built using the serverless stack on AWS cloud. APIs leveraged Amazon API Gateway service. A token-based authentication was used for communicating with the APIs using a secure HTTPS channel. The team built a bespoke iOS and Android native mobile application leveraging the React Native framework.

The operational health of the application was also constantly monitored, leveraging Amazon CloudWatch. In addition, Amazon SES was leveraged to send push notifications to employees regarding task assignments and other alerts, and Amazon SNS was used for all internal communication.

Results and Benefits

The cloud-native application helped the employees to review requests, prepare quotes and send quotes for customer approvals. Once approved, projects were assigned to individual owners, progress was tracked, and invoices were scheduled at appropriate intervals. The application also enabled smooth and secured communication between employees and customers.

The bespoke, cross-platform native mobile application provided a simple and progressive way to collect customer information through standardized Capability Service Requests. The application further enabled the company to streamline the entire request submission process for the customers, and employees were able to process an increased amount of capability service requests from anywhere.

Next Steps

The company is looking to make further enhancements and innovations on its AWS cloud infrastructure. As the next step towards cloud transformation, the company plans to:
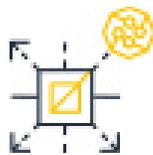
1) Develop a roadmap to the next level of Cloud technological evolution
2) Optimize cloud architectures to scale business operations and rationalize costs
3) Develop and support complex enterprise applications
4) Enhance its scalability, reliability, and agility with hybrid cloud applications

Benefits

Increased scalability:

With the new application, the company processed 4X more capability service requests

Uniform communications:

All communications related to a project happened through the application and were visible only to the assigned team members.

Fast turnaround time:

Quotation, approval, and project initiations were done in days instead of weeks

User satisfaction:

Users were able to get up-to-date statuses of all their projects, tremendously increasing their satisfaction

About Trigent

Trigent is a technology solutions company that provides comprehensive solutions for business problems via outsourced software product and applications design, development, and quality assurance. Trigent serves customers like Independent Software Vendors (ISVs), Enterprises, and SMBs in High Tech, Healthcare, Education, E-commerce, and Manufacturing areas. Trigent's solutions help clients overcome budget, schedule, and resource constraints. To learn more about Trigent visit www.trigent.com

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