Motherson Technology Services Cloud Services at work

for a Private Payment Gateway Company to deliver scalability & performance with a 10% increase in sales

About the Customer

Our client is a Private Payment Gateway Company, founded in 2012 and headquartered in New York. The company provides financial services like payment processing, mobile payments, payment gateway.

Business Challenges

The company has a great vision of providing one shop for all needs, removing the need for multiple providers gateway, reporting, analytics, risk and processing to streamline their customers business and operations. They were not able to provide stability and a good user experience to their end-users due to prevalent performance issues and were not able to onboard new customers and losing 10% sales. They didn't have AWS Certified professionals and looking for AWS experts for resolving their critical issues.

Architectural issues in system design

They have developed a serverless application to lower total cost and free developer from the heavy lifting of managing the servers, scalability & high availability so that the team can focus on their application development.

This serverless architecture had design issues such as,

- Handling of keeping the function warm for reducing latency
- Orchestration between different serverless layers
- Handling the version of serverless deployment

Overprovisioning of cloud resources

Due to performance issues, client team was manually over-provisioning the resources.

◉ Vertically scaling up the database to handle the load

This resulted in an increased monthly cost of running their workload on AWS, maintenance work for monitoring resources and provision additional resources when issues occurred.

Our Solution

We aligned our dedicated AWS Certified Professional Architect and Well Architected professional for understanding their workload, architecture and pain areas. We provided architectural review and provided solution for the prevalent issues they were facing in their workload. Our expertise in AWS helped the client's team in implementing the review items and resolving the issues which they were not able to diagnose and fix.

Resolving timeout issues to provide stability

◉ The MSID team worked closely with clients DevOps and application team to understand their issues

◉ We advised some timeout changes in serverless components and enabled AWS X-Ray for better traceability

◉ After analyzing the detailed logs of each layer and using X-Ray logs we were able to pinpoint the DocumentDB network timeout issues

◉ We advised them to upgrade the DocumentDB driver, which was causing the issue.

Scalability and performance issue

◉ The payment gateway was facing random latency (performance) issues, which the client team was not able to resolve as they were not able to find the root cause

◉ They were also facing scalability issues, while handling transactions and were doing the manual scaling to handle the load

◉ The performance is very critical for payment transactions due to these issues the users were having bad user-experience and unable to build the trust factor

◉ After doing the architectural review we found some design issues related to how they were handling the cold start-up issue of Lambda. We advised architectural changes and helped them in implementing the new architecture to resolve the scalability and performance issues

Benefits

Motherson Technology Services Limited offered a scalable, flexible, and secure cloud solution for Lulu and Sky ever-increasing business needs to help them stay at the forefront. We focus more on the business outcomes and helped our customer navigate digital transformation and adopt a cloud-first strategy with Motherson Technology Services holistic offerings.

- The main benefits were the stability of the application with zero timeouts and increased performance. Client gained the confidence of onboarding new clients which resulted in more business for the client and more revenue

- Resolving of critical issues in processing payment transactions, which is very critical to the nature of business, we were able to build trust of the client

- Client gain confidence for onboarding new customer resulting in increasing revenues

About Motherson Technology Services Limited

Founded in 1975, Motherson Group is an industry leader and one of the world's largest manufacturers of components for ther automotive and transport industries. The group's diversified portfolio makes it a complete solutions provider across the globe. Motherson Group serves its customers with a wide array of products and services through multiple business divisions including wiring harness, vision systems, modules and polymer, technology & software, aerospace, health & medical, logistics, retail and metal products. Motherson Technology Services is a global technology company that offers a consulting-led approach with an integrated portfolio of industry leading solutions that encompass the entire enterprise value chain. Our technology-driven products and services are built on two decades of innovation, with a future focused management philosophy, a strong culture of invention and co-innovation, and a relentless focus on customer-centricity. An SEI CMMI Level 5 company, we have delivered best-in-class services to 430+ clients in 41+ global locations across all continents. We are a business division of Motherson Group, one of the largest manufacturers of components for the automotive and transport industries worldwide with 150,000 employees across the globe.