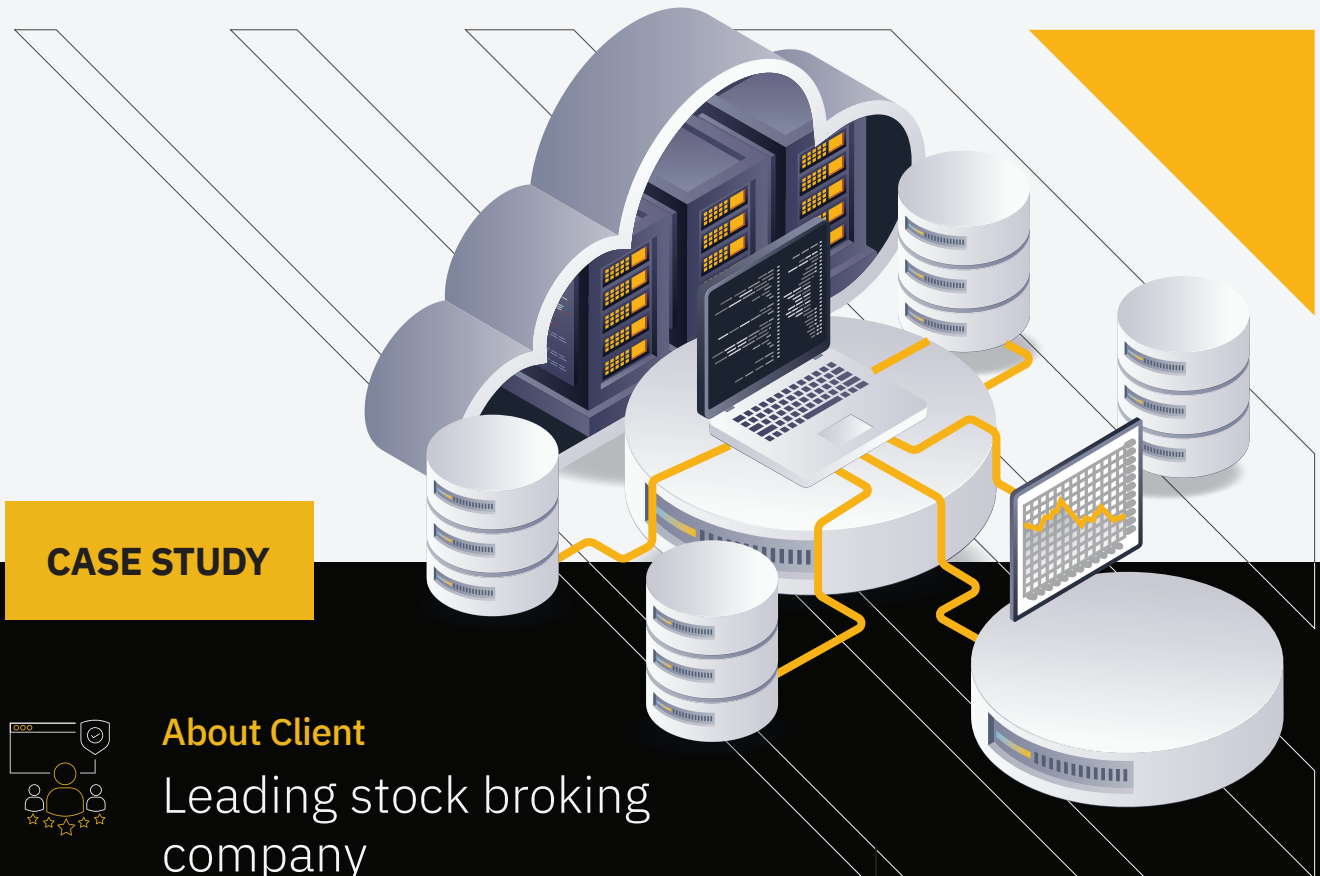# Achieving Operational Excellence with
Unified Cloud Platform

CASE STUDY

About Client
Leading stock broking company

Industry
Financial services

Service
Cloud Strategy and Transformation

About **Application**

The target application is comprehensive trading app designed to meet all customer needs, from managing demat and trading accounts to investing in IPOs and mutual funds. The new app places users at the centre of its design, ensuring a user-friendly experience. It streamlines various investment activities, making it a one-stop solution for investors. With its intuitive interface and robust features, the application caters to both novice and experienced traders, enhancing their overall investment journey.

Business **Needs**

As the client's business expanded, they identified the need to consolidate their business applications across multi-cloud platforms and optimize API Gateway Enterprise Edition (APIGEE) license costs. The current manual methods for deploying infrastructure and applications were proving to be unsustainable. The business goal was to modernize their applications by shifting to automated deployments using Infrastructure as Code (IaaC) and DevSecOps practices.

This shift aimed to boost efficiency, cut costs, and ensure a seamless, scalable operation across their cloud environments. A partner with extensive expertise in cloud management, cost optimization, and deployment automation was crucial in addressing these challenges and achieving the desired business transformation.

Business **Challenges**

The client faced several critical challenges that needed to be addressed to support their growing business operations and ensure sustainable growth. These challenges included issues related to multi-cloud management, cost optimization, automation of deployments, compliance adherence, and infrastructure maintenance.

- **Multi-Cloud Fragmentation:** With business applications spread across AWS, GCP, and on-premises deployments, there was a pressing need to consolidate workloads and enhance security management.

- **High APIGEE Costs:** The use of Google APIGEE for API management within an on-premises Anthos hybrid deployment led to substantial licensing costs while only a limited set of features was utilized.

- **Manual to Automated Deployment Transition:** Transitioning from manual infrastructure and application deployments to automated processes was essential to enhance operational efficiency and agility.

- **Meeting Compliance Requirements:** Ensuring that cloud application workloads adhered to regulatory guidelines was a key objective to maintain compliance.

- **Streamlined Infrastructure Maintenance:** The client prioritized adopting a cloud platform that facilitated easier infrastructure management, ensuring enterprise-grade application performance and security while maintaining high availability.

Business **Solution**

cloudxchange.io developed a strategic and comprehensive solution to address the client's needs and challenges. The strategy was focused on optimizing the current infrastructure, cutting costs, and making sure the transition to a more efficient system was smooth. By utilizing our expertise in cloud management and deployment automation, we worked to modernize the client's application environment and boost overall operational efficiency.

➤ **APIGEE Platform Analysis:** Conducted an in-depth analysis of the customer's existing APIGEE platform to identify specific functionalities in use and any interdependencies

➤ **Feature Mapping:** Thoroughly mapped essential features within APIGEE, such as API Gateway, HTTP and REST API hosting, API authentication and authorization, rate limiting, monitoring, tracing, and analytics, to determine the optimal configuration for migration

➤ **Migration Path Planning:** Strategically defined and planned the migration path from APIGEE to AWS API Gateway, considering data migration, system integration, and operational continuity

➤ **Backend Integrations:** Addressed critical backend integrations to ensure a seamless and efficient connection between the API Gateway and the underlying infrastructure and services

Tech **Stack**

Component	Tech Stack
Container Orchestration	Amazon EKS
API Management	AWS API Gateway and Lambda Functions
IAAC (Infrastructure as Code)	Terraform

Component	Tech Stack
Monitoring and Observability	CloudWatch, X-Ray, Dynatrace
Continuous Integration for codebase	Jenkins
Continuous Deployment and GitOps	argo

Project **Differentiator**

This project completely transformed our client's trading platform. By smoothly migrating and modernizing their multi-cloud infrastructure to AWS, they achieved significant cost savings and improved operational efficiency. Replacing the expensive APIGEE platform with AWS API Gateway allowed us to cut API management costs for the client while maintaining strong security and compliance

Automating deployment processes using IaaC and DevSecOps methods greatly improved agility and operational efficiency. This project set a new standard in the financial services industry for cloud transformation and modernization.

As a HERO initiative, this project highlights an outstanding transition to a unified, resilient, and cost-effective cloud platform, reshaping the client's operational landscape.

Business **Impact**

The strategic implementation resulted in significant improvements across various aspects of the client's operations. By addressing key challenges and leveraging advanced cloud solutions, the client experienced enhanced efficiency, reduced costs, and a more robust infrastructure. The following impacts highlight the transformative outcomes of this initiative:

Cost Optimization through APIGEE Replacement:
Significantly reduced costs by replacing Google APIGEE with AWS API Gateway, ensuring cost-efficient API management without compromising functionality.

Optimizing API Management:
The client transitioned from APIGEE to AWS API Gateway. Although APIGEE offers advanced features like monetization and a developer portal, these were not being utilized by the client. Therefore, the higher costs of APIGEE were not justified. Moving to AWS API Gateway provided a more cost-effective solution, better aligned with their actual usage and needs. This decision highlights the importance of matching technology investments to business requirements, rather than paying for unused features.

Unified Cloud Platform Transition:
Leveraged the advantages of a single cloud platform by migrating critical applications to AWS, streamlining operations, and enhancing synergy across the organization's infrastructure.

Efficient Datacenter Migration:
Successfully migrated datacenter workloads to AWS, ensuring data integrity and operational continuity while benefiting from AWS's robust infrastructure.

Reliable and Resilient Platform:
Established a reliable, resilient, and modern platform that consistently meets Service Level Agreement (SLA) commitments to end customers, thereby enhancing service quality and customer satisfaction.

About **cloudxchange.io**

cloudxchange.io – An NSEIT Company, is an integrated managed services provider for multiple clouds like Amazon Web Services, Azure, Google, and Oracle Cloud. We deliver complete life cycle management services from cloud consulting, multi-cloud aggregation, cloud back-up, cloud security, and disaster recovery to DevSecOps as a service. We leverage the best technology and provide tailored, custom-built solutions to ensure a smooth cloud transformation.

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