Fintech Leader Revamps Its IT Ecosystem to Reenergize Business Growth

▶ **Case Study**

Overview
Overhauling the application landscape

A leading US-based asset management firm was looking to revamp its IT ecosystem to better serve the interests of its customer base, which includes capital market firms and wealth and asset management companies.

Its existing monolith legacy system was unable to scale to keep pace with business growth and cater to the evolving demands of the financial industry.

Zensar's brief:
Assess, design, re-engineer, and migrate the onboarding, anti-money-laundering (AML), and asset management applications to Amazon Web Services (AWS).

Beyond the brief:
Going beyond delivering greater scalability, availability, and reliability, we enabled better security features and customization capabilities, leveraging our product engineering services and deep domain expertise in wealth management.

Challenges
Lack of IT agility

The business was weighed down by the legacy applications used for asset management. The monolith rigid application architecture was unable to support the customization capabilities needed to support different types of customers and the scalability to accommodate the addition of new customers. It also had performance and latency issues in different functions.

Solution
Reengineering the business backbone

With the goal of supporting the client's widening customer base and its growing requirements, we collaborated with the client's team to deploy the solution in three stages:

1. Assessment and planning:
We assessed the current applications and conducted domain design workshops to understand the business requirements. Using the findings, we defined the domain boundaries to design a microservices-based multi-tenant system.

2. Design:
We reengineered the application landscape on AWS, leveraging a domain-oriented architecture with event sourcing and command-and-query responsibility segregation (CQRS) patterns. In addition, we performed TCO analysis using the AWS Pricing Calculator, which computed results based on service selection and the load, factoring in non-functional requirements (NFRs).

3. Migration:

We deployed the infrastructure and applications on AWS, using DevSecOps processes. Next, we migrated the data, leveraging backup and restore functions and AWS data migration service (DMS).

Solution enablers

- **AWS Lambda** was used to run code in response to events and automatically manage the underlying compute resources.
- **AWS API Gateway** was used to create, publish, maintain, monitor, and secure REST, HTTP, and WebSocket APIs at any scale.
- **AWS DynamoDB** was used to handle high-traffic, extreme-scaled events seamlessly with nearly unlimited throughput.
- **AWS DMS** was used to move the database and analytics workloads to AWS quickly, securely, and with minimal downtime and zero data loss.
- **AWS Simple Queue Service (SQS)** was used to serve as a reliable waiting area for messages moving between different parts of the system.
- **AWS Simple Storage Service (S3)** was used to enable industry-leading scalability, data availability, security, and performance.
- **AWS Pricing Calculator** was used to create a cost estimate for the cloud services.
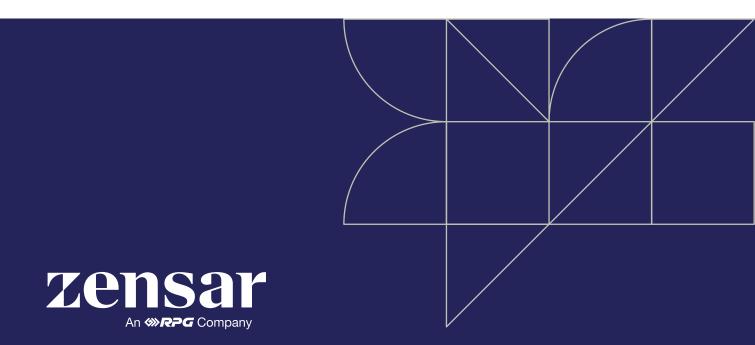
Security measures

- AWS Security Hub was deployed on AWS accounts to detect security gaps in the deployment architecture.
- AWS Shield was used to secure the public-facing website to prevent DDOS attacks.
- AWS PrivateLink was used to provide private connectivity between VPCs, AWS services, and on-premises applications securely on AWS.
- AWS Trusted Advisor was enabled on the AWS account to address security gaps.

Impact

Enhanced business services

- Reduced customer onboarding time from around one-two weeks to one-two days
- Reduced the release cycle from three months to one month
- Expanded business into new markets and with new partnership models
- Achieved system availability of 99.99 percent

Business outcomes:

The solution enabled the business to onboard customers faster with an optimized onboarding process and increased the productivity of financial advisors with efficient automation and heightened availability.

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