Revitalizing banking infrastructure:

Leading APAC bank gains agility with AWS migration

CASE STUDY

About Client
Leading APAC
banking institution

Industry
Banking and financial services

Service
Cloud migration

Business **Need**

The client was hosting their application and services at an on-premises data center. To leverage the benefits of cloud technology, they wanted to deploy a new application version of their existing digital banking application infrastructure on the AWS cloud. The client's objective was to take immediate advantage of the instant scalability, elasticity, isolated processes, reduced operational effort, on-demand provisioning, and automation offered by the AWS cloud.

However, they wanted to achieve this sizeable rehost migration with minimum downtime and data loss and at a reduced cost. Therefore, the client needed an experienced partner with expertise in detailed landing zone assessment and in designing a future-proof, resilient architecture on their AWS cloud.

Business **Challenge**

Migrating existing processes and data to the cloud is a demanding endeavor, riddled with various challenges encompassing security, efficiency, compatibility, and compliance. The client had their digital banking application services and applications infrastructure residing in a captive data center, necessitating a shift to AWS. This transition aimed to migrate the client's existing infrastructure into AWS, without disrupting the existing digital banking application infrastructure. The goal was to take immediate advantage of AWS for optimizing the IT infrastructure, enhancing performance, and streamlining operations. Unsurprisingly, the process encompassed multiple expected challenges that required careful handling. They included:

- Shifting business-critical applications from different on-premise seismic zones to the cloud while maintaining compliance

- Securely storing processed data with a high SLA and near-zero data loss

- Migrating the commercial host base database to RDS + EKS application stack

- Backing up the Native Database and restoring the mechanism for migration

- Meeting strict recovery objectives. avoiding any data loss

- Scaling up and down as per business requirement

- Burning cost on idle servers and infrastructure during non-business hours

Over the years, cloudxchange.io has carved a niche for itself in the domain of cloud migration with its competent team of experienced specialists. The client naturally turned to cloudxchange.io for support and guidance through this complex transition.

Business **Solution**

cloudxchange.io helped the client swiftly analyze their digital banking application landscape and developed a robust cloud migration strategy.

The initial assessment involved visiting the client's premises to understand the operation and functional dependencies of the digital banking application services. Since the digital banking application relied on raw data from the existing AWS local region setup, the client decided to rehost the infrastructure on the AWS cloud. To ensure a successful migration, we also implemented a landing zone assessment that provided the client with a comprehensive view and guardrails for cloud success. The landing zone assessment helped the client to understand how to enhance their identity and access management (IAM), and improve network and data security in AWS while also ensuring compliance.

Based on the finalized configurations of the assessments, the team deployed AWS services for digital banking applications within the existing security landing zone. This made migrating to AWS easier while ensuring secure data replication from multiple sources using a Direct Connect solution. Additionally, cloudxchange.io helped the client optimize costs by basing charges on the amount of data replicated or copied from on-premises to AWS.

The migration process for digital banking applications involved the following steps:

❚ Configuration of network components on the AWS CVP account

❚ Setting up services for the BS4 infrastructure, including EC2, Load Balancers, ECR, IAM

❚ Replicating on-premises database tables to the AWS RDS instance using native log shipping

❚ Replicating data on digital banking application EC2 clusters from the existing platform and from on-premises as per request

❚ Validating data and initiating required microservices

❚ Conducting performance testing

❚ Verifying cutover on AWS clusters

❚ Completing the final cutover and returning to normal operations

To move the database to the AWS Cloud, cloudxchange.io created an RDS instance according to the client's recommendations and configured it as per the BoM. The client used a native log shipping strategy to facilitate the smooth transfer of the database to the AWS cloud environment.

Ensuring the best performing managed service experience for digital banking applications involved multiple steps, including:

❚ Hassle-free migration of digital banking application CV workload from on-premises to AWS as per the requirement

❚ Deployment based on AWS best practices

❚ Provision of comprehensive 24/7 end-to-end monitoring support and managed services

❚ Efficient management of network connectivity between the data center, other office locations, and the AWS cloud

❚ Building database managed services for MSSQL, tailored to meet the commercial requirements

❚ Management of AWS transit gateway on AWS

❚ Backup management for the entire AWS landscape

Tech **Stack**

❚ AWS EKS
❚ Elastic cache
❚ EC2 instances
❚ EBS Storage – GP3 SSD
❚ Elastic Container Registry (ECR)
❚ RDS instance
❚ S3 storage

❚ Transit gateway
❚ Direct connect
❚ VPC attachment
❚ Direct Connect
❚ Firewalls
❚ Subnets
❚ Security groups and virtual network
❚ Virtual machines

Business **Impact**

The landing zone assessment helped achieve the following domain objectives:

❯ Streamlined capacity planning with Amazon S3, enabling flexible and cost-efficient usage-based billing

❯ Increased operational efficiency by freeing up valuable IT resources

❯ Eliminated capital expenditures for enterprise backup software and hardware systems

❯ Seamless availability of data for restoration on the cloud, eliminating the need for physical server retrieval

❯ Rapid data restoration within hours, ensuring business continuity during critical events with EC2 instances and Amazon S3

❯ Ability to scale up business operations depending on the demand without interruptions

cloudxchange.io.IO turned the client's vision of leveraging AWS with uninterrupted operations into a reality. In addition, the integration of cloud infrastructure enabled the client to achieve significant improvements in data reporting capabilities, resulting in an increase in records generated per second. The transition to AWS facilitated by cloudxchange.io has enhanced the client's security and flexibility while simultaneously reducing their technological costs. Here are some notable benefits for the client:

| Seamless transition through rehost migration of the application server | Comprehensive security and compliance adherence assurance | Enhanced productivity and opportunities for growth | Round-the-clock infrastructure monitoring and support |

| Continuous and uninterrupted connectivity with Direct Connect implementation | Cost reduction and risk mitigation measures | Streamlined operations with simplified management |

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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