NTT DATA

India | Financial Services

Transforming customer experience with a cloud-native, multi-cloud platform for one of India's leading private banks

Client profile

Founded in 1994, the client is one of India's leading private banks, and one of the country's largest companies by market capitalization on the Indian stock exchanges.

Today, they have a network of over 5,600 branches, with over 16,000 ATMs and have a presence in over 2,900 Indian cities and towns.

AWS cloud landing zone components

- EC2 Compute services
- Elastic Load Balancing
- Application Load Balancing
- Network Load Balancing
- Auto-scaling
- S3

GCP cloud landing zone components

- Compute Engine
- Elastic Load Balancing
- Cloud DNS
- VPC Firewall Rule
- Dedicated / Partner interconnect
- Cloud Storage

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We delivered improved CX for the client's customers, employees, and partners alike by extending the existing data center into the cloud and leveraging cloud- native services like PaaS and CI/CD.

Summary

As a leading player in the extremely competitive banking sector, the client felt that enhancing customer experience through improved digital and system performance would be key to maintaining its competitive advantage.

To achieve this goal, a hybrid multi-cloud solution was conceptualized — one that consisted of the client's existing data center, as well as cloud services from both AWS and Google Cloud Platform (GCP) deployed by NTT. This would enable the client to select the appropriate cloud execution based on business needs, rather than be confined to a single cloud platform.

Business need

Seamlessly extending the existing on-premises data center to the cloud

As is the case with other large banks and financial institutions, aging, legacy infrastructure in their on-premises data center was an area of concern. With a heightened focus on CX, they wanted to ensure that they could significantly improve the agility, scalability and availability of applications and services being used by employees, partners and customer.

A suite of Platform-as-a-Service and Continuous Innovation/Continuous Delivery (CI/CD) services were identified to achieve these objectives, and the primary challenge was to incorporate these services into the IT landscape by extending the on-premises data center to the cloud as seamlessly as possible.

In addition to improving performance, another key imperative of this initiative was to reduce existing operational costs by leveraging consumption-based billing models, where possible, to demonstrate lower TCO.

Solution

Extending into a managed, secure hybrid multi-cloud environment

After conducting a number of workshops with the client to map the existing data center and application landscape and understand their business needs, we architected a solution where application landing zones would be deployed on both AWS and GCP, allowing the client to move applications from their existing data center into the cloud.

The proposed cloud landing zones would be a mix of cloud-native components and BYOL security components, all interconnected through the client's MPLS infrastructure, resulting in improved agility and performance. Another key element of the design would be using cloud automation to achieve greater agility while minimizing human intervention.

Deploying and managing multiple redundant availability zones while ensuring security and compliance

For each landing zone, we architected multiple VPCs, each with its own specific role. For example, a Transit VPC was created to manage traffic between the cloud landing zone and the bank's data center and branches. A key consideration of the design was that traffic between the existing data center, branches, the cloud landing zones and the users would flow optimally and securely.

We also designed the architecture to be highly available by integrating robust failover protocols into the solution.

Automated provisioning provides greater agility

Using industry-leading third-party tools for provisioning and automation allows significantly improved multi-cloud deployment, allowing management teams and developers to use the same tools and configuration files across multiple cloud platforms.

The tools chosen also allow for automated infrastructure management, not just across cloud but also across other technologies forming part of the overall solution. This significantly reduces the time to provision new infrastructure and applications, improving the agility of the client's infrastructure.

Outcomes

A scalable and cost-effective solution

Underpinning the client's capabilities is a fully redundant hybrid environment made up of their existing data center, with agile, secure cloud infrastructure that is highly available and billed consumptively.

Infrastructure is regularly upgraded and upscaled to meet the growing needs of the business, and is seamlessly delivered using the latest automation tools.

This new, modernized infrastructure allows them to deliver an improved customer experience, innovate faster, and launch new products and services secure in the knowledge that the new hybrid multi-cloud landscape can scale seamlessly to meet growing business needs while keeping costs under control.

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