Engagement Overview

TO THE NEW, and AWS Premier Consulting Partner helped MakeMyTrip, one of the largest Indian Online Travel Aggregator’s (OTA) to migrate its complete applications stack running on two traditional data centers to AWS within a short span of under six months. This was one of the largest cloud migrations in the Indian subcontinent.

About the Customer

Founded in the year 200, MakeMyTrip Limited is the largest travel portal in India offering bookings of flight tickets, holiday packages, hotel reservations, rail tickets, bus tickets, cab services, visa services, and more. The company has been continually evolving its technology to meet the ever-changing demands of the rapidly developing global travel market, steadily establishing itself as India’s leading online travel company. MakeMyTrip also enjoys international presence with offices in New York, Singapore, Kuala Lumpur, Phuket, Bangkok, and Dubai.

Business Challenge

MakeMyTrip has to deal with millions of customer transactions daily. MakeMyTrip has traditionally used data centers and had to spend considerable time and effort in the procurement, up-gradation, and maintenance of servers. In addition, the existing infrastructure could not effectively handle traffic fluctuations, thereby impacting their business negatively. In a nutshell, the objective and the need for Cloud migration was 3 fold as recognized by TO THE NEW:

- Remove complexities in managing Active-Active setup
- Reduce operational overheads in managing infrastructure
- Reduce on-going spends on servers, storage & networks

TO THE NEW worked with MakeMyTrip to audit their current infrastructure while helping them with capacity planning and sizing to move to a more scalable, reliable, secure, and cost-effective solution.

Industry: Travel & Tourism

Highlights:

- Migrated 1500+ servers running in two data centers to AWS in less than six months
- Designed a zero-downtime migration strategy for making each application live on AWS
- Leveraged Terraform for infrastructure orchestration and environment replication
With a workload classification and migration prioritization-led approach, TO THE NEW was able to ability to instantly replicate the complete environment, launch new servers for experimentation when needed, for reducing administrative efforts and thereby increasing the team’s productivity at MakeMyTrip.

**Business Solution**

MakeMyTrip was running around 1500 servers with 100+ databases, applications, and microservices that needed to be migrated to the Cloud with zero downtime. TO THE NEW adopted a hybrid setup approach to ensure a seamless migration and transition to the cloud while ensuring the data-center as a backup, to avoid any migration challenges.

**Overall migration plan preparation for MakeMyTrip:**
- The landing-zone setup
- Designing run-and-operate model on AWS (for deployments, monitoring, backups, configuration management, and centralized logging)
- Categorize applications across different migration waves for ease of deployability

**Ensured zero impact for the end customer:**
TO THE NEW took a hybrid setup approach, treating AWS site as a parallel data center, to begin with. The build, deploy, and monitoring mechanisms were re-architected to make a replica state of each application available on the traditional data center along with AWS at any point in time. This allowed the customer to divert a small percentage of the overall traffic to AWS for initial testing, gradually increasing the traffic towards the AWS Cloud while keeping a check on scalability and performance before completely moving the web traffic to the Cloud.

**Technical Excellence**
- Implemented a hybrid approach for deployments, roll-backs, and database replications
- Used common tools on AWS and data center environment for monitoring, configuration management, and security needs
- Private network connectivity was established between existing data centers and AWS using AWS Direct Connect
- Used Route53’s Private DNS to eliminate the need for hardcoded application and database endpoints
- Implemented advanced security mechanisms leveraging AWS CloudTrail, Inspector, WAF, GuardDuty, and Lambda
- Used Terraform for infrastructure orchestration and environment replication
- Deployed applications across multiple availability zones for high availability
- Leveraged S3 for infrequent access and Glacier for low-cost backup and long-term archival needs

**Business Outcome**
TO THE NEW completed the data center migration, one of the largest in India in a short span of under six months. MakeMyTrip started serving 100% traffic from AWS and immediately decommissioned one of the data centers, and moved to an all-in migration. The new setup was more stable and had significant performance improvements:
- **Agility:** Faster provisioning of infrastructure, reducing build time by 30%
- **Improved performance:** 50%-70% of reduced latency
- **Cost efficiencies:** Reduced infrastructure spends with no upfront Capex
Technology Stack

Backend

Frontend

Database

Cache

DevOps

Amazon Web Services (AWS)

Other Technologies

Know more about our Cloud & DevOps offerings

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