Tech Mahindra

LARGE CUSTOMER INFORMATION MANAGEMENT AND DATABASE MIGRATION TO CLOUD FOR A LEADING TELECOM PROVIDER IN EUROPE

Case Study.

Connected World.
Connected Experiences.

ABOUT THE CUSTOMER

Telia is a new generation telco company with approximately 20,000 employees, serving millions of customers across the world, empowering people, companies and societies to stay in touch with everything that matters 24 hours in a day, 7 days in a week and 365 days in an year.

BUSINESS SCENARIO

The telecom major's Customer Information Management (CIM) platform consisted of monolithic applications hosted in a data center in Sweden. Telia wanted to collaborate with Tech Mahindra to come up with a futuristic solution that would solve their existing architecture reliability and performance issues. Some of the key challenges that were hindering the current environment:

- Legacy CIM platform that was difficult to scale with a growing user base
- Increased blast radius due to the tightly coupled architecture, where an issue in one component
- could take down the entire system
- Large, monolithic applications having reliability and performance issues
- Dependency on costly, third-party licensed applications
- Tedious manual deployments for new-feature releases
- More downtime due to the increase in maintenance cycles

OUR SOLUTION

- Tech Mahindra has re-architected CIM platform by decoupling the new architecture using microservices framework.
- Tech Mahindra used AWS DMS to migrate database from on-premises Oracle to cloud native Amazon Aurora, which helped customer to save costs on licensing.
- Continuous integration and continuous deployment (CICD) pipeline has been setup to automate the deployment process by reducing application downtime.
- Automated deployment of microservices as a Docker container in AWS ECS (later moved to AWS Fargate serverless framework) with a single click from Jenkins.
- Route 53 was configured to provide CIM platform accessibility for customers and on premises applications.
- AWS ALB was configured with Fargate for high availability and performance.
- Terraform was used to automate infrastructure deployment and the application deployment was orchestrated via Jenkins.
- High Availability(HA) was implemented by deploying the microservices across multiple availability zones in AWS Fargate and utilizing AWS ALB.
- Auto scaling has been setup for each microservices to scale based on memory utilization and AWS ALB to balance the load thus improving the performance of the system.

AWS SERVICES CONSUMED

- Amazon EC2
- Amazon ECS
- AWS Fargate
- Amazon ECR
- AWS ELB
- Amazon Route 53
- AWS VPC, VPN
- Amazon RDS
- AWS Database Migration Service
- AWS Cloud Trail
- AWS Config
- Amazon S3
- AWS IAM
- AWS Lambda
- AWS CloudWatch

THIRD PARTY SOLUTION

- Oracle's Advanced Queuing
- Jenkins
- JFrog

VALUE DELIVERED

- Re-architected CIM platform using microservices framework.
- Defined loosely coupled architecture with microservices to reduce the blast radius and provided the ability to scale each component independently.
- Greatly improved the availability and reliability of the application as the application is leveraging some of the core AWS Services such as AWS ALB, Auto Scaling and AWS Relational Database Service.
- Successfully migrated 70+ million records of data in a span of few hours from on-premise to AWS Cloud using AWS Database Migration Service(DMS).
- Automated deployment of microservices as a docker container in AWS Fargate in a single click with Jenkins.
- Business witnessed significant performance improvement as the application was designed to use load balancing and caching techniques.
- Compliance and risk measures are addressed at scale using the AWS best practices and recommendations incorporated with AWS IAM, AWS Config, and AWS CloudTrail.
- With the features and services such as AWS Fargate, AWS ALB, and autoscaling, TechM were able to greatly reduce the time to market with zero downtime.
- Architecture was designed following AWS best practices and recommendations thus providing enhanced security, improved performance, and highly available solution

➢ Independent microservices architecture
➢ Improved performance
➢ Single click automated deployment
➢ Zero downtime
➢ Highly available (HA) & cost-effective solution

About Tech Mahindra

Tech Mahindra offers innovative and customer-centric digital experiences, enabling enterprises, associates and the society to Rise. We are a USD 5.1 billion organization with 141,100+ professionals across 90 countries helping 1123 global customers, including Fortune 500 companies. We are focused on leveraging next-generation technologies including 5G, Blockchain, Cybersecurity, Artificial Intelligence, and more, to enable end-to-end digital transformation for global customers. Tech Mahindra is one of the fastest growing brands and amongst the top 15 IT service providers globally. Tech Mahindra has consistently emerged as a leader in sustainability and is recognized amongst the '2021 Global 100 Most sustainable corporations in the World' by Corporate Knights. With the NXT.NOW™ framework, Tech Mahindra aims to enhance 'Human Centric Experience' for our ecosystem and drive collaborative disruption with synergies arising from a robust portfolio of companies. Tech Mahindra aims at delivering tomorrow's experiences today, and believes that the 'Future is Now'.

We are part of the Mahindra Group, founded in 1945, one of the largest and most admired multinational federation of companies with 260,000 employees in over 100 countries. It enjoys a leadership position in farm equipment, utility vehicles, information technology and financial services in India and is the world's largest tractor company by volume. It has a strong presence in renewable energy, agriculture, logistics, hospitality and real estate. The Mahindra Group has a clear focus on leading ESG globally, enabling rural prosperity and enhancing urban living, with a goal to drive positive change in the lives of communities and stakeholders to enable them to Rise.

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