



## Customer Success Story

**Daffodil helps Chalo to migrate to AWS cloud platform; resulting in 40% reduction in cost of IT operations**

# CHALO

**Customer:** Chalo

**Country:** India

**Industry:** Information Technology and Services

**Our Role:** Software Engineering



## About the Client

Chalo is a public transport tracking application that streams the real-time location of public transport vehicles on a mobile app. The app informs the users about the Estimated Time of Arrival (ETA) of public vehicles such as buses, metro trains, inter-city trains etc. It has been equipped in more than 15,000 public vehicles in 17 cities across India and is helping people to find out an optimal way to reach their destination on time.

**40%**

reduction in operational costs

**50%**

reduction in new city onboarding time

**0**

downtime throughout the migration

**99.9%**

uptime ensured



*“Writing this to recognize and appreciate the team’s effort and commitment to the project. With continuous changes and multiple dependencies, the team has managed to keep on the project on track and maintain steady progress, which I would like to laud. While there is more to go, I feel confident that we will get there smoothly.”*

**Vinayak Bhavnani,**

Co-founder & CEO, Zophop

## The Situation

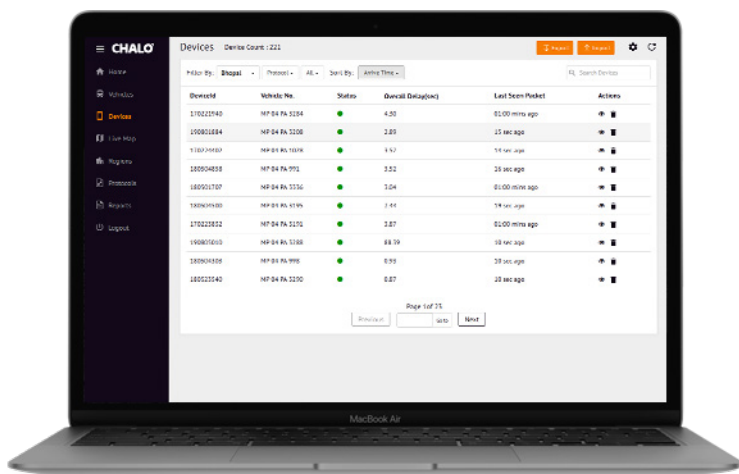
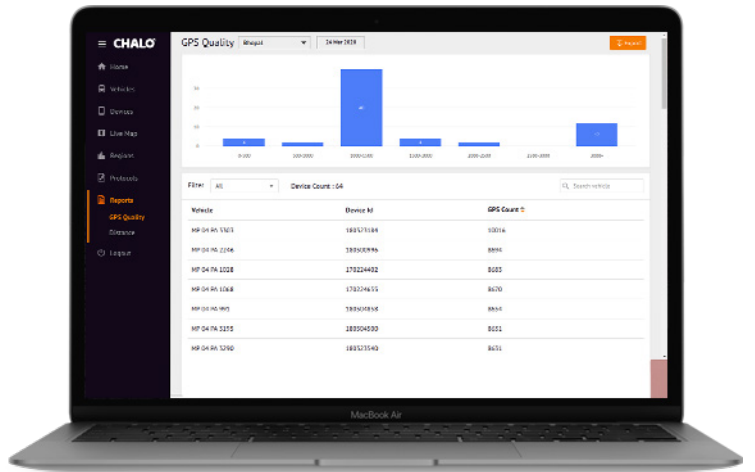
In order to enable the users to purchase from their application, Chalo needed to share the real-time location of thousands of city buses with the users. When thousands of daily commuters depend on your application for their daily commute, you cannot afford to have slow response time, bottlenecks, and downtime in your application. Additionally, as per their expansion plans, Chalo needed a robust application infrastructure that could allow them to initiate their operations in newer cities in minimum possible time and configuration constraints.

The application infrastructure was built using GCP, which does not offer many opportunities for the scalability of the application. As a PaaS platform, it provides very limited control over operational costs especially when there is a sudden surge in the traffic. Also, there were a lot of limitations being imposed on the application. As a result of experiencing these challenges with GCP, Chalo decided to rethink its CloudOps strategy. The key requirements were to:

- Migrate the entire application infrastructure to AWS in order to improve the scalability and robustness of the application.
- Seamlessly migrate the application database to AWS while maintaining the security and integrity of the data.
- Integrate CloudOps to standardize deployments across different environments and provided end-to-end infrastructure management support to handle outages and provide proactive resolutions.

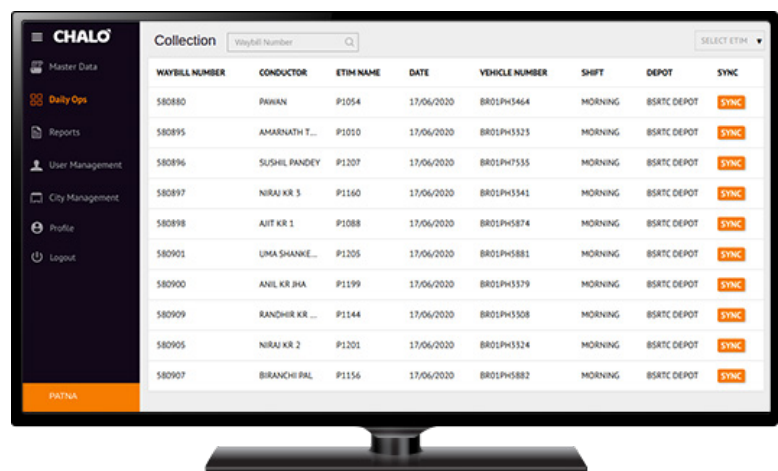
# The Solution

Daffodil took a consulting approach with Chalo wherein our Cloud experts enlightened the Chalo team with benefits, limitations, and cost factors of different cloud platforms. They decided to migrate to AWS because of the flexibility and wide service portfolio offered by AWS Global Cloud Infrastructure. Also, the agility of the AWS Cloud allowed us to plan the complete migration of the application within a period of one month and with minimum down time. Additionally, as AWS Select Consulting Partner, Daffodil was best poised to leverage the AWS network and its features.



In order to ensure a consistent and smooth migration of the application from GCP to AWS, Daffodil's cloud architects built a strategic roadmap to migrate the application to AWS. To start with, Daffodil's CloudOps team first created a disaster recovery (DR) environment on the AWS Cloud and synchronized data from the on-premises production environment. The team then built a new production environment on the AWS Cloud and synchronized it with the cloud-based DR environment. Chalo then switched its operations to run all-in on the AWS Cloud and decommissioned its GCP suite.

Once we built the cloud-based production environment, we only needed a couple of days to perform testing before the switchover. This was carried out without any downtime for the customers. We deployed Linux-based application and database servers to Amazon Elastic Compute Cloud (Amazon EC2) instances. Attached to the instances are Amazon Elastic Block Store (Amazon EBS) volumes, which provide throughput in milliseconds, the speed required for payment transactions. Yedpay uses Amazon Simple Storage Service (Amazon S3) to store backups and monitor logs, which are collected using Amazon CloudWatch and integrated with Chalo event management systems. Application instances were launched in Autoscaling groups with Network Load Balancer to automatically scale up and scale down during peak surge and least traffic period.



# The Impact

Migrating to AWS platform has resulted in 40% savings in the IT operations cost. Now, Chalo is also able to align and plan its IT investments with business needs as AWS provides a pay-as-you-go model. Expanding to newer cities has become a matter of a few days as compared to weeks with GCP. The configuration changes while onboarding a new city to the Chalo app takes 50% less time. Counting on Daffodil's technology support, Chalo is also planning to integrate e-ticketing for other modes of public transport such as trains, metro, ferry, auto-rickshaws, taxis, and more.



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# Technology Stack





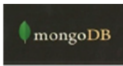







- ALB
- CloudFormation
- AutoScaling
- EC2
- VPC
- CloudWatch
- SNS

# About Daffodil

Daffodil Software is a software engineering partner to 100+ organizations across the globe and has been helping them in making their software products more robust, teams more productive and processes more efficient. Our ability to look beyond technologies to deliver innovative solutions with scale and speed has been lauded by our clients as well as the tech community worldwide.

Since our inception, we have invested in organic growth; building on our engineering capabilities, organizational processes, and culture required to deliver a truly collaborative ecosystem for solving technology challenges. At the core of Daffodil lies a culture rooted in innovation, learning and a result-oriented mindset.

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