



Case Study

Fleet Monitoring Implementation for Sweden-Based Leading Manufacturer of Commercial Vehicles

Executive Summary

LTIMindtree has been engaged with a leading heavy vehicle manufacturing company to implement an IoT-based solution to help fleet owners to learn critical information and avoid future failures. The entire solution is based on AWS provided services, and has enabled fleet businesses to achieve greater efficiencies while managing their fleets in a better way.

Client

The client is a Swedish manufacturing major of commercial vehicles, primarily known as a manufacturer of heavy trucks and buses. The enterprise is also heavily involved in the manufacturing of engines for marine and general industrial applications.

Challenges

Fleet Monitoring System:

- Make fleet operations safer, cleaner, and more cost-effective
- Perform analytical queries on historical data
- Consultant assignment follow-up system
- Track and follow up consultant assignments and take further steps

Business Need

- Creation of a new business model – Vehicle-as-a-Service
- Turning vehicle data into information, insights, and actions for service network
- Better uptime and decreased Vehicle on Road (VOR)

LTIMindtree Solution

The goal was to develop a Fleet Monitoring Implementation (Vehicle-as-a-Service) model. The solution is based on microservices based and server less architecture for high scalability. The solution provides seamless integration between a dealer management system for service delivery and integration with third-party data systems. The cloud provided stream analytics services to pick the messages from the IoT hub and deliver the data to cloud managed SQL. The application rule engine designed in a configurable approach to address regional and vehicle diversity was also helpful.

Another implementation was performed to track the consultant assignment; this solution was developed using the microservices-based approach. The entire deployment automation and notification has been developed by leveraging AWS provided managed services.

Business Benefits

- **170K connected** vehicles monitored across the globe
- **Reduced 80%** downtime
- **0.5Mn** exceptions and diagnostic events processed per day
- **60K vehicle actions** created and managed

Why AWS

AWS is the chosen platform by the client to host their Fleet Management and Consultant Assignment Follow-up System on the cloud environment, leveraging multiple technologies catering to Microservices-based architecture, DevOps services, and IoT services. Both solutions use niche services like Amazon Elastic Compute Cloud (Amazon EC2) instance on Linux machine and managed services like API Gateway and IoT services, CloudFormation templates, Jenkins for automated application deployment, and Lambda services for implementing microservices. These services go well with customer's business expectations to provide required output.

Why LTIMindtree

LTIMindtree and Amazon Web Services (AWS) help enterprises to integrate fleets with IoT solutions, enabling the fleet businesses by enhancing real-time visibility of fleet better and customer experience. They also help with management activities to streamline their day-to-day assignment by leveraging the automated application deployment and scale based on the demand.

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