

IOT ENABLED VEHICLE TRACKING



A blurred background image showing a meeting table with coffee cups and hands. The scene is set in a professional environment, likely a meeting or a collaborative workspace. The focus is on the hands and coffee cups, suggesting a meeting or a collaborative workspace. The background is softly blurred, emphasizing the foreground elements.

ABOUT THE CLIENT

The client is a Central Government innovation award-winning SME startup and has been in this business for 4+ years. They came to us with a proven business model in the logistics industry. Telematics is one of the fast-moving use cases of IoT and is largely adopted in developing countries.

BUSINESS CHALLENGE

Our client had a requirement regarding connecting more than 10,000 devices at a time and wanted a solution enabled with live tracking & alert-based notification. When they couldn't get desired results from earlier service providers, they approached us, 9series. Telematics was a new domain for us and it surfaced us an exciting and challenging opportunity, where we had to provide them with a real-time solution to:

- Enhance the visibility of their fleet assets with live tracking
- Ensure driver safety and reduce the fuel & maintenance cost.
- Receive alert-based notifications on all essential activities.
- Multiple activity report generation
- Multiple device accessibility



SOLUTION

Building custom solutions as per client needs have always been our forte. Based on the client's requirements, we realized that connecting all the devices will make it easier to track each of them on a real-time basis. An IoT enabled product integrated with live tracking can ensure the safety of the driver, monitor all the vehicle activities, and generate live reports with timely alerts. With an amalgamation of technologies and developers, we created a product with following features:

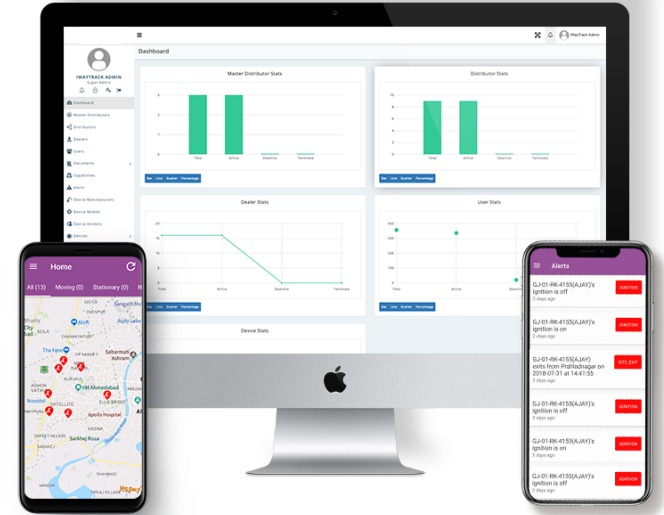
FEATURES

Live Tracking

Tracking the live movements of all the vehicles connected to the device, along with the speed, direction, etc.

Stoppage

Generate a report on the number of stops made by the vehicle on a given trip.



Overspeed

Receive notifications when the driver exceeds the speed limit along with detailed reports on the number of times the speed limit was exceeded in a week/month. You can enter the speed limit of the vehicle & if the vehicle exceeds the speed you will be notified.

KM summary

A report that will tell you how many kilometres a vehicle has driven.

Route Playback

You can have a playback of the route of the vehicle for a particular day/s, week/s, month/s.

Trip Summary

Generate a report to look at the summary for your trip

Route Deviation

Get immediate notification when a vehicle deviates from the regular route. This can be helpful for school, office bus/vans, for older people travelling alone, etc.

Apart from the above features, the client can also generate reports for battery usage, and performance. Reports for Ignition, AC, Battery, Halt, Restrict Route, Vehicle Performance, Lost connection, Daily travel Summary, Ignition Wise trip, Quarterly Customer Feedback Collection - prove to be a wholesome solution in every sense.



CUSTOMER BENEFITS

Our customized solution enabled the client to scale their operations according to the requirements. Apart from enhancing the operations through automation, our solution also helped the client expand its reach to many unexplored territories. They are able to send the information about the speed, location, and navigation over the server more quickly. Plus, they can schedule and manage effective routing procedures. And most significant of all, they can now eliminate human errors and set up an automatic logistics workflow. The client saw improvements in the following key areas:

- Live tracking enabled them to track the vehicle through any device.
- Retrieve notifications on changes in route, speeding, etc.
- Access on Phone & Web both.
- Generate accurate reports for better future decisions.
- Monitor vehicle performance and enhance productivity.
- Generate huge amounts of data for valuable insights.
- Get notified about usage of fuel and gas consumption.
- Monitoring driver behaviour, wear and tear, road, and weather conditions.
- Optimized deployment of drivers and vehicles.

TECHNOLOGIES USED

Each feature in the solution is carefully crafted with the blend of some of the leading technologies, in which we have experience and expertise over the years. It uses below technologies:

- C++ based TCP listener supporting thousands of concurrent connections.
- Amazon SQS
- Python
- DynamoDB
- Lumen as Microservice Framework
- VueJS
- PubNub
- MapMyIndia
- Script Based Automate and Load Testing
- OpEx
- Aurora DB an alternative to MySQL
- Android & iOS Mobile apps in the form of alternate UI to end user.



Lumen





CLIENT FEEDBACK

The client was happy with the teamwork, adherence and expertise they got to see throughout the project and expressed their gratitude. They appreciated our efforts and also revealed that our team is a combination of uniqueness with a rare quality of 100 % dedication, transparency and professionalism.



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