

VOLVO

CASE STUDY





OVERVIEW

The Volvo Group (AB Volvo) is a Swedish multinational manufacturing company headquartered in Gothenburg. While its core activity is the production, distribution and sale of trucks, buses and construction equipment, Volvo also supplies marine and industrial drive systems and financial services. In 2016, it was the world's second largest manufacturer of heavy-duty trucks. The Volvo group used to comprise of Volvo cars as well, but AB Volvo sold its stake to Fort Motors in 1999. In 2016, AB Volvo had sales of 301bn Swedish kronor (£27bn) and a pre-tax profit of 20.8 Skr.



REQUIREMENTS

Volvo wanted to manufacture a new SKU called UD Buses that will have in-built WiFi, infotainment and GPS. The solution required for these buses to be rugged and stable, as a majority of them travel through remote locations frequently. Along with the hardware, Volvo also wanted SMS/ OTP verification, bandwidth control, policy management and an option to advertise on the infotainment systems.



HOW WE HELPED

- ▶ Reduced OpEx and CapEx
- ▶ Easy tracking of number of users, bandwidth control, policy management and reporting
- ▶ Large volume of data to perform consumer behaviour analytics
- ▶ Increased revenue by on-board advertisements
- ▶ Integrated BYOD support
- ▶ Customised captive portal
- ▶ Simplified and centralized network management
- ▶ A reduction in network fault calls
- ▶ Ability to remotely control, monitor and troubleshoot
- ▶ Ubiquitous Wi-Fi coverage and stronger signal
- ▶ The ability to support high density environments with more concurrent users per access point
- ▶ Access point Monitoring
- ▶ Proximity marketing
- ▶ Increased ticket sales

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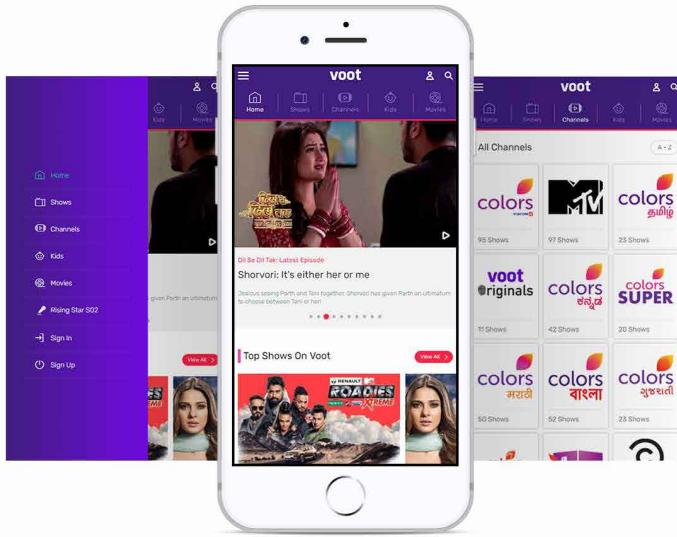
The famous Heavy duty vehicle manufacturer, Volvo, is in the process of deploying hardware that enables WiFi, Infotainment and GPS in its new technologically advanced SKU known as UD Buses.

The Volvo group is a Multi-billion dollar conglomerate that manufactures heavy duty vehicles and equipment for marine, industrial and aeronautical usage. They also provide end to end solutions for financing and support. Volvo employs over 95000 people worldwide and has production centres in 18 countries with its sales spreading to over 190 markets. In 2016 the Volvo Group's net sales amounted to about SEK 302 billion (EUR 31.9 billion). The Volvo Group is a publicly-held company. Volvo shares are listed on Nasdaq Stockholm.

Volvo has been trying to capture a larger market share in India, and with large corporates like Mercedes and Ashok Leyland dominating the market, they decided to introduce a new SKU in the bus segment called UD Buses. These buses will be technologically advanced and will have in-built infotainment, wireless and GPS

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User Interface

capabilities. The installation of the hardware will be done at the time of fit outs and would be available fully loaded with features to the end customer.

This new SKU is about to be launched in 2018. The fit outs are underway in Bangalore, where Wifi-soft is installing the infotainment, WiFi and GPS devices for them.

The challenges in such a deployment are always complex as,



The buses frequently travel to remote locations where there is a lack of internet connectivity



There need to be stringent protocols to manage and control the bandwidth usage by each user



One needs to enable URL filtering to discourage the usage of internet for accessing mature or potentially harmful content



It is very difficult to address operational faults or downtime in remote locations as the vehicles are always mobile.



Off- loading and failover protocols become difficult to implement

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To address the above challenges, Wifi-soft deployed its very own 710N 4G LTE Series access point on 5 UD buses as a Proof of Concept (PoC). The buses were supported with a 4G backhaul and could access the internet with a variety of mobile carriers like Vodafone, Airtel, Idea etc.

Wifi-soft provided Volvo with a customised captive portal and the ability to allocate bandwidth to the travellers at a pre-defined rate and discourage unwarranted downloads that might gobble data speed. This ensures fair usage and helps the administrator manage speeds. There is URL filtering to monitor a user's activity as per government regulations. Other policies defined by the administrator like discontinuing access after a set time, load balancing, group based policies could even be enforced. There was also an SMS/OTP verification procedure established to help capture the correct details of the user.

As per the PoC, each bus could easily register and manage 30 concurrent users. This number can be easily scaled as and when the need arises. Each user experienced high speed uninterrupted connection even when travelling in remote areas. Volvo tested the solution for over 2 continuous months, and got exceptional results and decided to deploy the solution on all its buses. The manufacture of these highly advanced buses is in process and the company intends to launch it this year.

Excerpt

<https://en.wikipedia.org/wiki/Volvo>

<http://www.volvogroup.com/en-en/about-us.html>

<http://www.telegraph.co.uk/business/2017/12/27/chinas-geely-adds-swedish-assets-taking-major-stake-truck-maker/>

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