

Controllex

Website Link - <https://controllex.io/?lang=en>

About the Project

Controllex is a Wi-Fi remote device. It receives commands like ON, OFF, etc., from the Controllex app through cloud (Internet) and it transmits to the devices like AC, TV, STB, etc., using its strong inbuilt IR sensors.

Using the Controllex app you can control your AC, TV, STB, etc., from anywhere in the world. It acts as an universal remote supporting many brands.

ControlleX is a small device that can send signals to all types of remotes in your home, including remotes for air conditioning, fans, lights, fountains, radio, TV, or garage doors, in order to help you control all of these through your phone. It stands out from other products because it works with all remote controls, not just smart appliances.

Featuring an intuitive and user-friendly interface, the ControlleX app is easy to install and to use. Through it you can take advantage of the full power of the ControlleX device by turning your smartphone into a remote control with unlimited range – wherever you are, whether it's on your way home from work or at the other end of the planet, with the ControlleX app you can fully control your home.

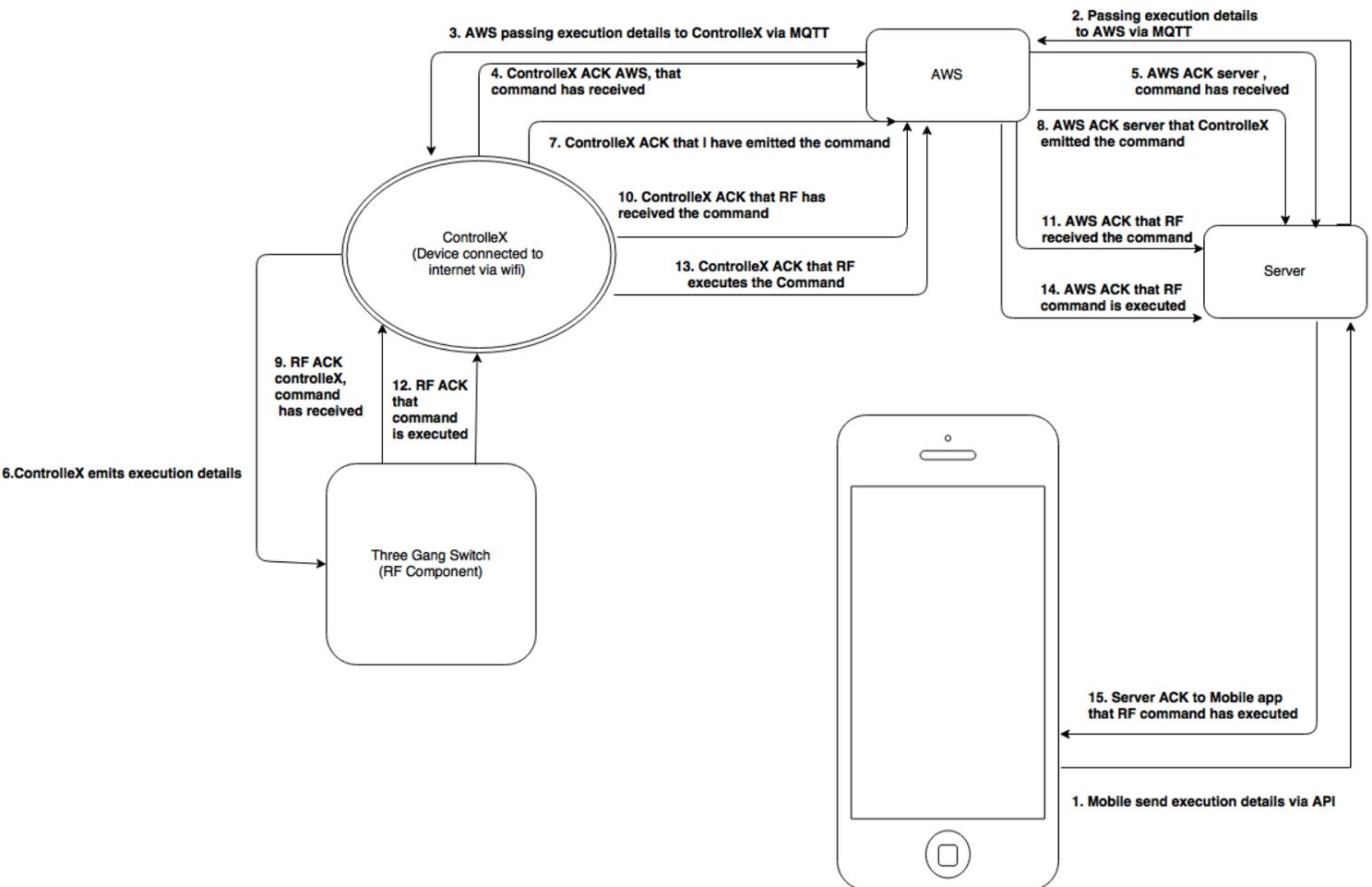
Imagine that you've just landed in another country for a short holiday when you realize that you may have left your A/C system or smart lights ON back home. You don't have to call a neighbor and ask him or her to check your home for you. With ControlleX, you can turn all your remotely-controlled devices on or off with a simple tap. It's that easy.

How it works?

In everyday scenarios, ControlleX is even more useful. Going beyond basic on/off triggers, it can help you set up very useful auto-triggers for your home. For example, you can set it up to automatically turn on air conditioning once the temperature in your room exceeds 23 degrees. For even more accuracy, you can also add a time trigger, such as 6 p.m., so that your A/C system will begin to cool your house before you actually get home from work. In this way, you can remotely create the perfect environment home throughout the day.

The connection between the ControlleX app on your phone and your ControlleX device back home is made through the cloud. Taking advantage of the portability and convenience of cloud computing, the ControlleX cloud serves as a conduit for the signals your phone sends to your

ControlleX device, processing them quickly and effectively. As soon as you press a command button, the ControlleX app passes it on to the cloud over the Internet through your Wi-Fi or mobile data connection, which then sends it back to your home. If you use multiple ControlleX devices in different rooms, the same command can trigger the same response in all rooms.



Adding Commands

One of the most powerful features of ControlleX is the ability to set up permanent commands for daily events such as sunrise or sunset, based on which you can then create specific rules for your home. For example, you can turn off all devices after Sunset, or at a specific hour. You can also turn off particular devices between particular hours, or on particular days, when you're away from home, for example. It is also possible to turn off the TV or radio and other remote-controlled devices during prayer times. In this way, you don't have to manually turn off one device at a time. ControlleX helps you save time.

Powerful Extensions

What if you want to go beyond controlling your air conditioning system and fans? Wouldn't it be convenient for your radio or TV to turn on automatically at a certain hour, just in time for your favorite program? ControlleX extensions make that possible, allowing you to control a wealth of home appliances such as fans, fountains, garage doors, door locks, lights, blinds, or speakers so long as these have a remote control. By pointing their remote controls at ControlleX, you can control them all from within your app. You can add multiple remotes to your app through extensions, choosing only those you need.

ControlleX was designed to be easy to use for the whole family. Your controlleX can be controlled through multiple mobile devices – after the initial setup, you can share different in-app remotes with a simple tap with your spouse, children, or anyone else. Other users can request access to your remotes, but it will be up to you to choose whether to grant it or not, which makes controlleX both private and secure. You can install ControlleX on multiple devices, such as a work phone and a personal phone, so that you can use it whenever you need to, even when you are at work or traveling.

ControlleX can make your life better by allowing you to more easily control essential conditions in your home, such as temperature, lighting, or sound. It saves you time and increases both your comfort and your convenience. To discover the complete range of features ControlleX offers please visit www.controllex.io.

Android/Apple Watch

Controlling your product is just a 'tap' away and it is always in your wrist. Controllex app meets the stringent standards of Apple to give you the great experience in the watch.

Controllex is designed to suit the varied available Android wearable devices. It is designed to give you the best experience in both square and circle shaped screens.

3D Touch

Using 3D Touch, you can directly access a particular remote and send a command in a second.

iOS Widget

Important commands of the remote can be accessed in the lock screen widget itself without opening the app.

Key Features

1. Control your home using Web, iPhone and Android app
2. Apple Watch
3. Android wear
4. 3D Touch

5. iOS widget
6. Share remotes with family and friends
7. Permanent commands with timers
8. Auto learning
9. Rich package for ultimate product
10. Free Installation service

App links

<https://controllex.io/>

<https://web.controllex.io/>

<https://play.google.com/store/apps/details?id=com.app.controllex>

<https://itunes.apple.com/us/app/controllex/id1142483683?ls=1&mt=8>

Industry

Embedded system, IoT, Automation, Home control, Towards AI

Technologies used / Platforms

RoR, iOS, Android

Services used

1. AWS RDS
2. AWS EC2
3. Plivo
4. AWS Elasticbeanstalk
5. AWS Load balancer
6. Broadlink
7. AWS Certificate manager
8. STC
9. New Relic
10. AWS S3
11. AWS IOT
12. AWS SQS
13. InterCom

FLEETROVER

Website Link - <http://fleetrover.com>

About the Project

FleetRover is a unique app that has been designed for efficient real-time tracking and fleet monitoring. It also has the ability to record each driver's duty status automatically based on real-time data.

FleetRover consists of an Android and Web application, in which the mobile app is initially designed to track and monitor fleets in real-time. In those days, drivers were asked to record their daily duty status in shifts and provide it to check the compliance of their HoS(Hours of Service) rules. We then updated the application in which the duty statuses can be electronically logged(E-Log) by the drivers in the mobile app, that reduces error prone pen and paper process. Using the mobile app, drivers can make print outs of their daily Electronic logs and can provide it anywhere including as well the road side inspections.

When ELD(Electronic Logging Device) mandate came into effect in both Canada and US, and to be compliant with the current rules the Driving hours should be calculated based on the actual speed data fetched directly from the truck's ECM(Electronic Control Module). To achieve this challenge we have upgraded the hardware device and implemented logics to track down the driving hours automatically from the truck's ECM as expected. Upon its great success we are now moving towards the success of compliant technology service provider for fleet management and real-time monitoring.

Driver's daily shifts are made easy as we have integrated complex logics in which the application acts as expected to be complaint with the rules in both Canada and US regions.

Fleet managers are provided with Web App which helps in tracking their fleets efficiently, including when and where they are currently at. It also provides insight in the activities of drivers based on their total hours of working, pattern of driving the truck, etc. Fleet managers are also using the Web app to monitor their driver's HoS, pick-up and drop-off deliveries, and other day to day work that all fleets deal with.

By using the Web application of FleetRover, fleet managers are kept informed on the activities of drivers under their account. We have also included an in-app messaging feature with which the drivers can seek supports from fleet managers via an integrated chat box. Not only it is used for messaging, drivers can also send photocopies/envelopes of tickets, receipts, etc. to the fleet managers throughout their shifts.

The Electronic Logs can also be seen against each driver from Web app and fleet managers are also informed of what and how long the drivers are running their shifts.

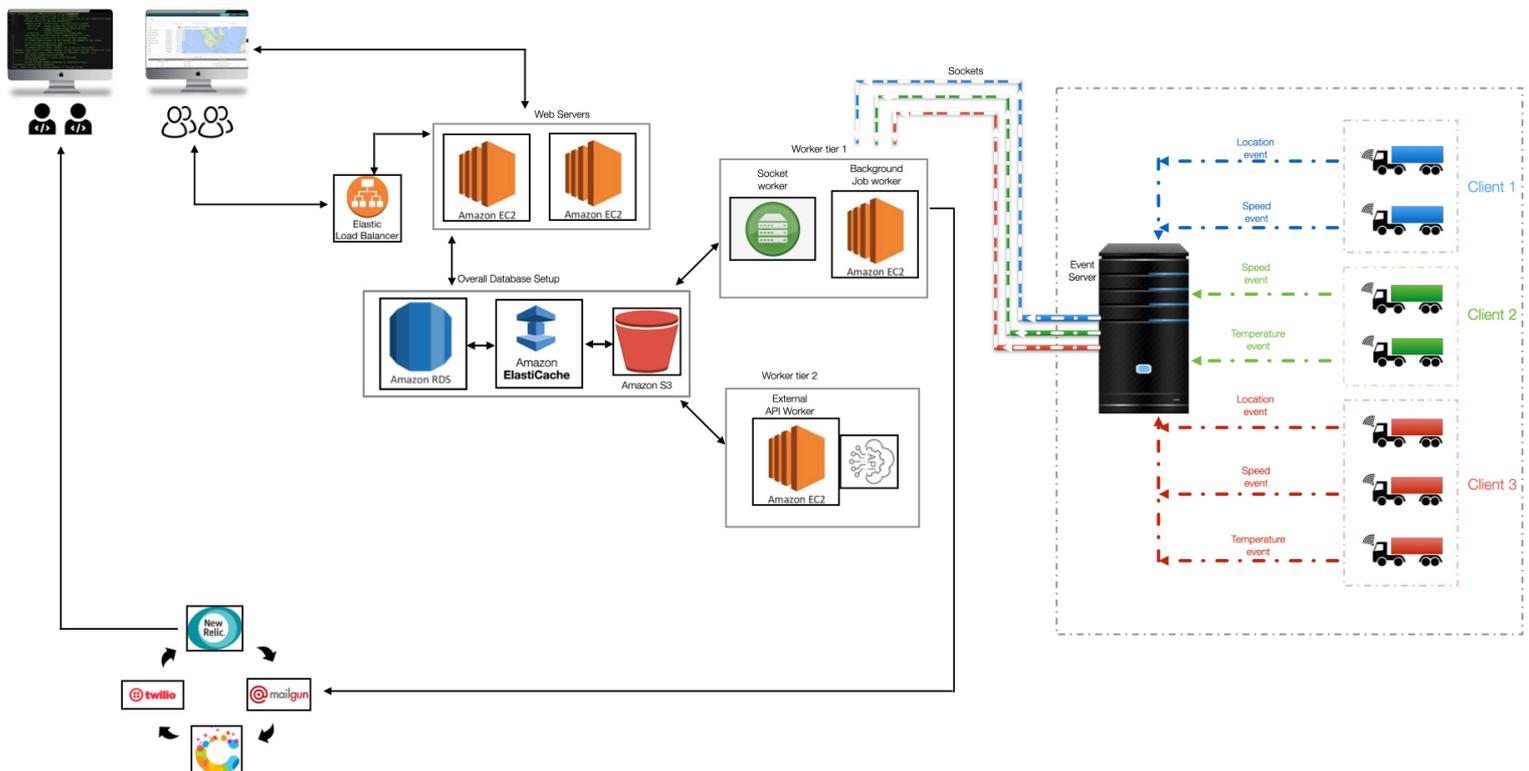
How it works?

When a truck moves, we calculate the speed events reported from an electronic device fitted to the truck. After which we process them to change status of driver's duty respectively to the received speed values. With numerous logics integrated, the FleetRover mobile app tracks down the total hours utilised in Driving/OnDuty, OffDuty, Sleeping and presents the data in an Electronic Log format to the drivers.

By using the Electronic log from mobile app, the drivers can monitor their daily limits for Driving and rest to be compliant, so they can rest assured when an official begins a road side inspection.

We have implemented logics that makes fleet drivers shifts very easy, when moving from Canada to US and vice versa. When drivers move to and fro in-between Canada and US, FleetRover switches the logics automatically(as per the respective country) and always shows the up-to-date info, to the drivers based on the HoS rules present in that country(Canada/US)

Fleetrover's Overall Process Flow



Key Features

Mobile App:

- Calculates the Driving hours in realtime and warns the drivers when they are about to reach the maximum driving hours
- Compliant with the current Hours of Service rules of Canada and US
- Integrated messaging system to chat with fleet managers in their shifts
- Ability to send and receive envelopes/photocopies of receipts, images, daily logs
- Drivers can accept their next objective(task) of pick-up and Drop-off loads, created from Web App
- DVIR Vehicle inspection reports can also be created and added from within the app

Web App:

- Daily logs of Drivers can be viewed from the corresponding driver's page
- Overall reports like audit, fuel tax, activities of assets, non transmit, etc can be easily generated from the Web app
- Location of trucks can also be viewed from Web App, to find out complete path of assets in integrated map
- Web app provides the ability to create drivers and so makes fleet managers work easy when new drivers are to be added into the system
- Using Web app, various POIs can be created. Using POI alerts fleet managers are notified of the assets when it is reached or goes out of a POI.
- Fleet managers can create and assign objectives(tasks) to the drivers from Web app

Benefits

- Empowering fleets and its drivers to monitor their daily utilisation of working hours and remind them to be compliant with the ELD rules in Canada and US.
- Electronic Log generations for Daily shifts under compliance
- Provides audio visual warning alerts to drivers/fleet managers when they are about to run over their total working hours
- Automatically tracks driver and truck statuses like over speeding assets, Non-transmitting assets, etc.
- Up to date in HoS regulations as per the norms of CCMTA and FMCSA

Industry/Domain

- Logistics

Technologies

- Ruby On Rails(ROR) for Web App
- Android Studio(Java) for Mobile App
- Amazon Web Services(AWS) for cloud computing services

Platforms

- Web Application
- Android Mobile Application

Services Used

- Google Places API is used as the location service throughout the applications.
- Nominatim API is also being used to fetch and process the location of the assets in real time
- Firebase for application analytics
- StatusCake and Pagerduty for site monitoring

App Store Links:

<https://play.google.com/store/apps/details?id=com.fr.fleetrover>

Website Links:

<http://fleetrover.com/>