Setting Up e-Tracker and API

This manual explains how to retrieve the gps data from e-Tracker using the e-Tracker API.

Setting up the e-Tracker for GPS data logging:

The e-Tracker board you have purchased has a preloaded firmware which will collect gps data and send it to the e-Tracker API server, when powered up. (If your e-Tracker board does not have a preloaded firmware then download the firmware from this link and refer the e-Tracker firmware updating manual for details about updating the firmware). The following steps mention how to make the e-Tracker collect and upload the gps data to the server.

1. First insert a SIM card that can access gprs, in to the SIM card slot on the bottom side of the e-Tracker. Make sure there are no pin number or other form of protection for the sim card.

2. Connect the GSM and GPS antennas properly.

3. Power on the device by connecting a power supply on either of the external/internal terminals. The supply voltage limits are marked near the terminals. Also take care to provide a supply with enough current rating (adviced a 2A power supply).

4. When the board is powered, the ON led (red colour) will turn on. Soon the NW (red colour) and ST (Green) leds will turn on. This indicates the GPS/GSM modem in the board is working fine.

5. If the board has loaded with the firmware provided, then the L1 led (red colour) will blink in a heart beat fashion. Now wait till the TM led (blue colour) turns on.
6. If the board has a valid gps fix in the gps then the TM led will turn on and continue blinking. It is to be noted that the board sends data to server only if the gps data received is valid (i.e. after the TM led starts blinking). After each upload the 'L1' led in the board will blink for a very small duration (for about 30 ms).

Trouble shooting

If your e-Tracker is not working properly, then check the following for trouble shooting.

1. Check if the PWRKEY and VBAT are shorted using a jumper.
2. Check whether the HWRX and HWTX of the atmega328 on board is connected to the HWTX and HWRX of the sim808 using a pair of jumpers.

For these connection information visit our wikipage. (http://elementzonline.referata.com/wiki/ETracker).

3. Check whether the SIM card is inserted properly.
4. Check the antenna connections.
5. Check the current rating of the power supply used. It is advised to use a power supply with minimum 2A current rating. (The voltage limits are marked near the internal/external terminals.)
6. Check the power selection switch. If you are providing power through the EXT terminal it should be at the EXT position, other wise it should be at the BATT position.

If you have checked all these and still no hope, then contact Elementz.

FAQ

Que) The status (ST) and network (NW) leds are not bright enough. Also the network led is not blinking when the modem is registerd to the network. Why?

Ans) The e-Tracker board contains an onboard SD card slot. So most of the e-Tracker boards leaving Elementz are SD card enabled in default. The SIM808 uses the same pins for SD card interfacing and indication LEDs (ST and NW). That is the reason why the leds are not bright and does not show any indication when registered to network.

Que) Why is there a delay in getting the first gps data?

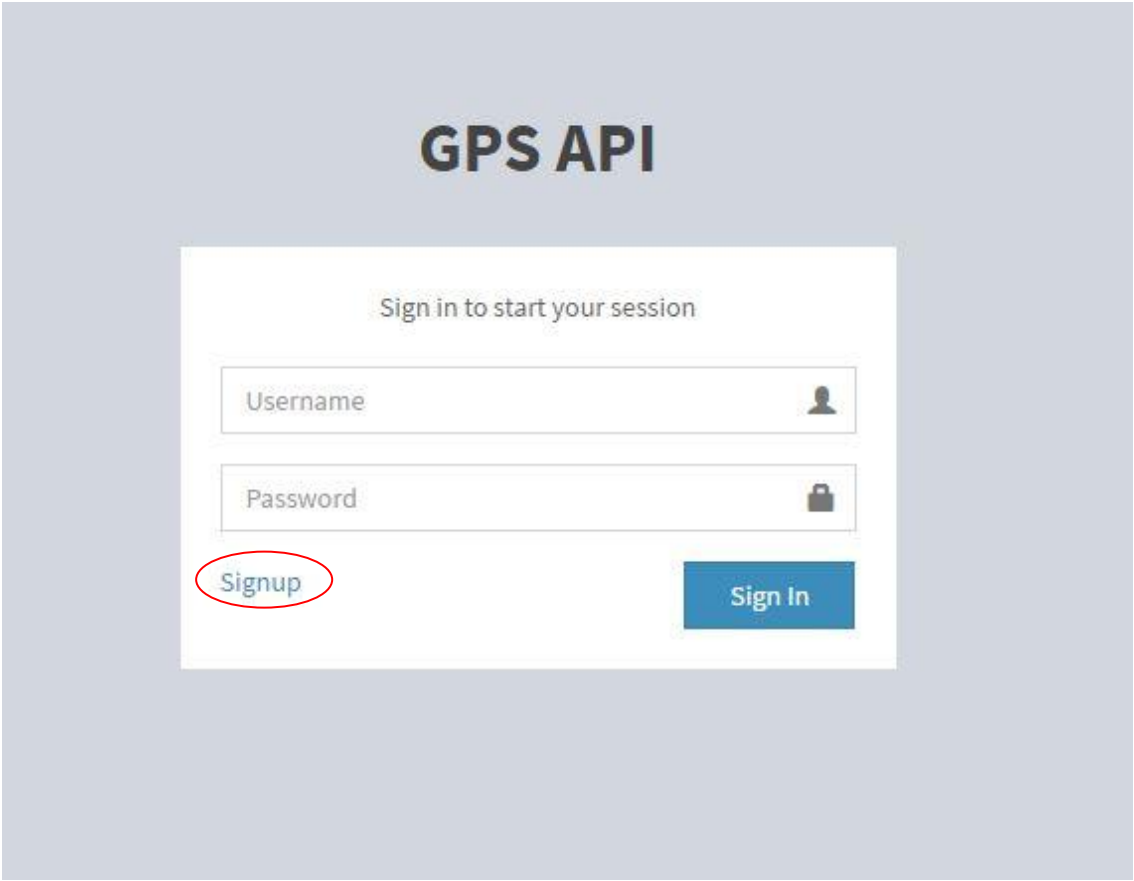
Ans) The e-Tracker uploads only valid gps data. For getting a valid gps data it takes a minimum of 30 seconds after the board is powered. The duration for getting a valid gps data depends on different parameters, like number of GPS satellites in visibility, moving speed of the e-Tracker board, proper connection of the gps antenna etc. You can observe the TM led (blue colour) on board to know whether the modem is receiving a valid gps data. It will start blinking when the e-Tracker has a valid gps fix.

Setting up the User Account to get GPS data from e-Tracker:

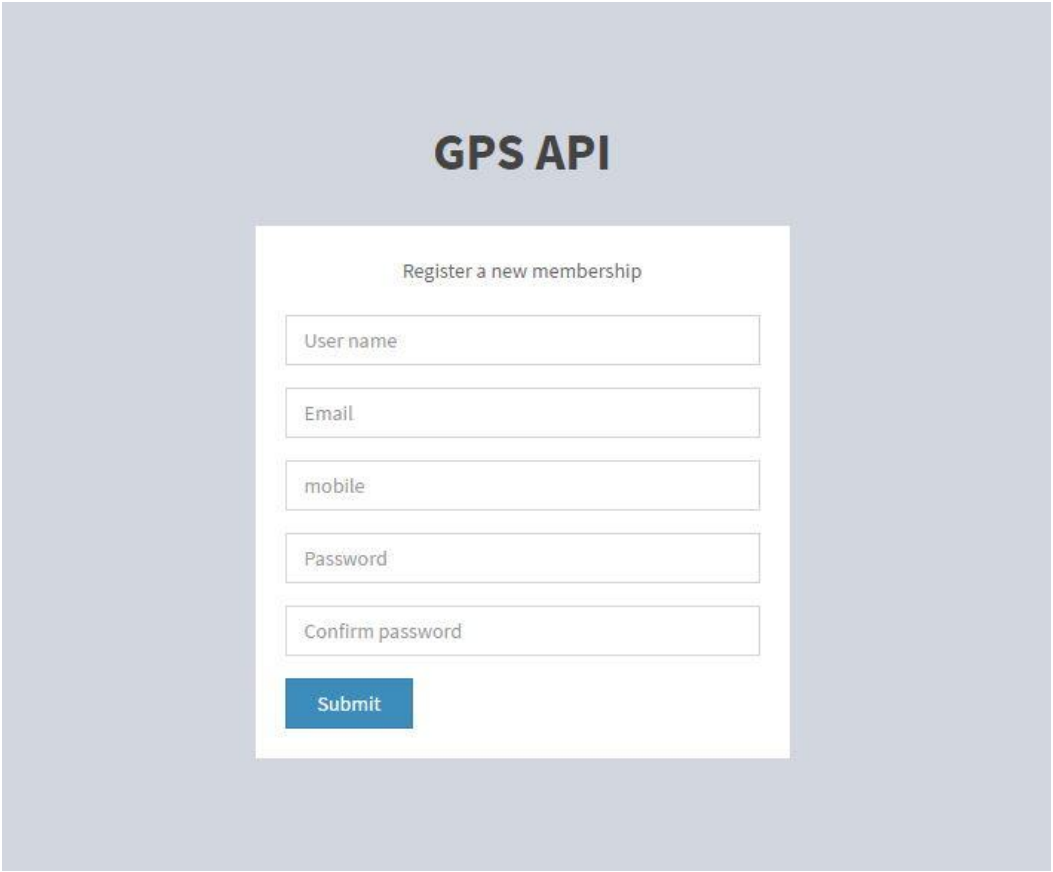
In order to get the location data from the e-Tracker, you need to create a user account in the e-Tracker API server. Prior to uploading the data using your e-Tracker, you have to add the device IMEI, in the account.

Follow the below steps to create a user account and to add a device.

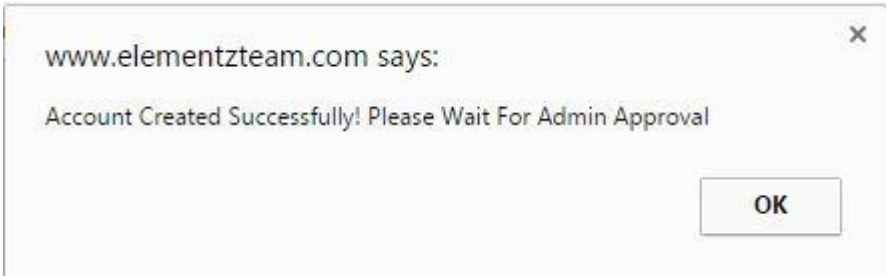
1. Go to http://www.elementzteam.com/gpsapi/user/
2. First you have to create an account. Click on the sign up option in the sign in page.



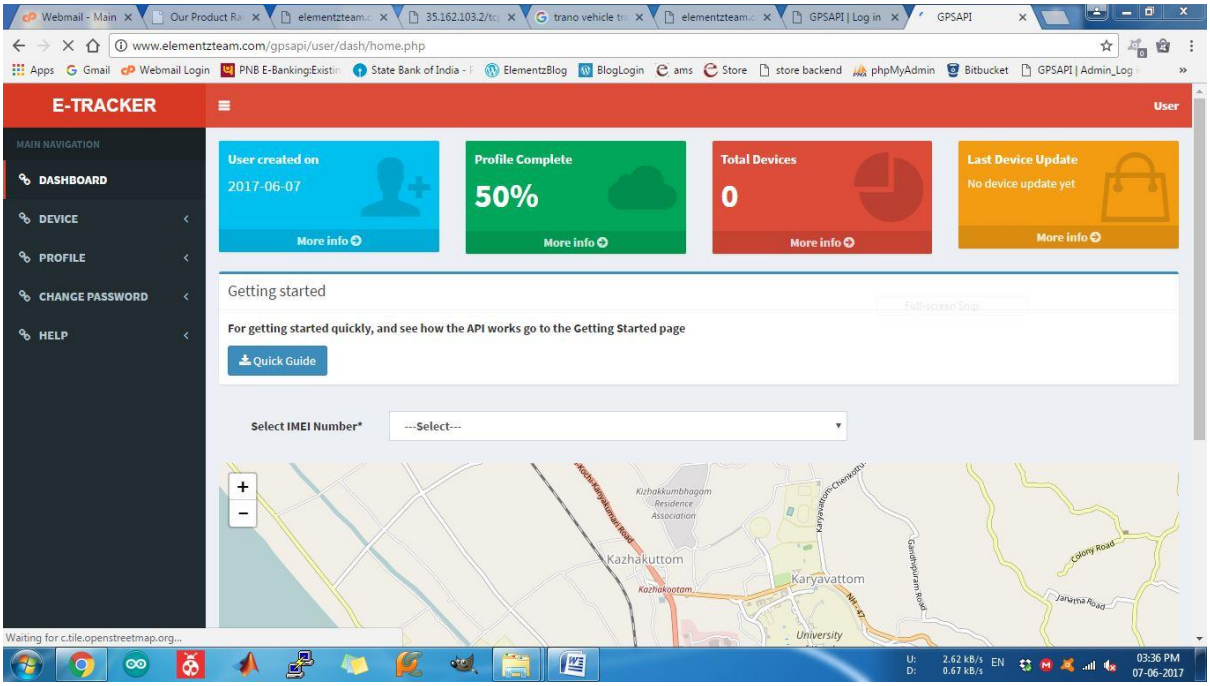
3. Fill in the forms and click submit.



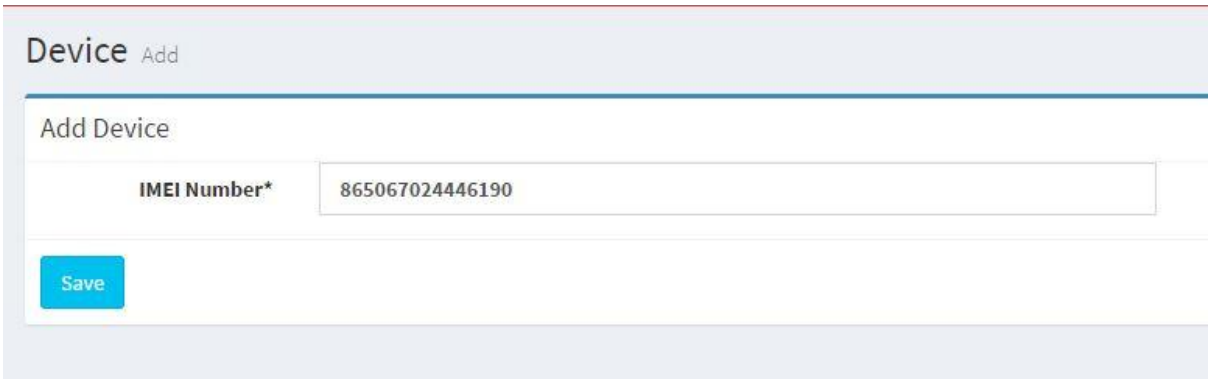
4. Now your account is pending for verification and will be verified and approved by Elementz team. Don’t worry we will verify it as fast as possible.



5. Press the OK button.
6. After verification you can sign in to the account using the same link http://www.elementzteam.com/gpsapi/user/.
7. Provide the user name and password you have given for account creation. After signing in you can see your dash board.



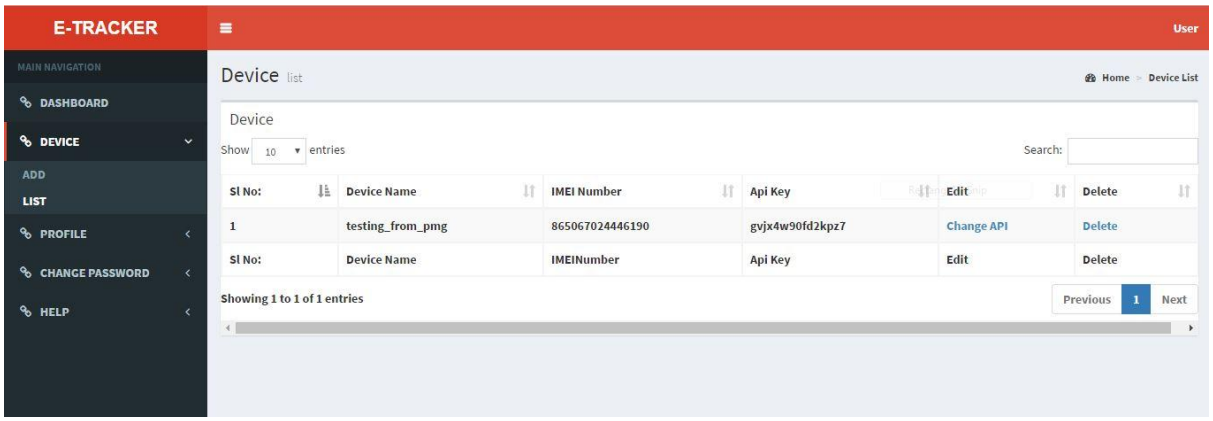
8. The dash board contains alot of information along with a map. On the left side of the dash board you can see a panel. It is very easy to use the panel.
9. To add a device click on the DEVICE menu in the panel.
10. From the options select ADD.
11. You have to provide the IMEI of your e-Tracker in the field. (The IMEI of the board is printed on the SIM808 module onboard e-Tracker).



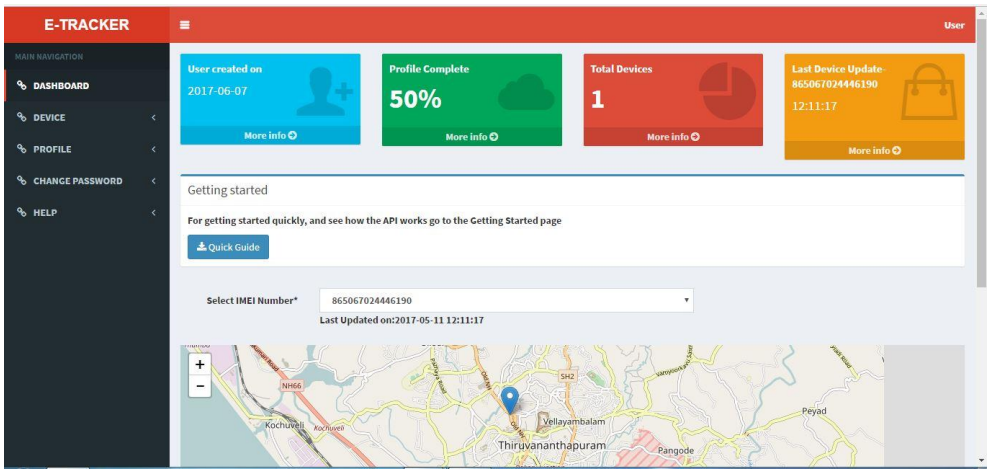
12. After adding the IMEI click save and you will see a notification as below.

*Only those IMEIs in the elementz database are valid and will be added successfully. So if there is any problem with adding the IMEI please contact us.

13. You can get the API key corresponding each IMEI number from the LIST section under devices. There are provisions for changing the API key and removing the device as well.



14. You can add multiple number of devices using the ADD section under devices.
15. After creating the account and adding the IMEI, switch on the e-Tracker to start sending location data to the server.
16. How to retrieve the data using the API key is explained in the HELP section in the panel with examples.
17. Elementz has added a provision to see the last known location of each device in the dashboard itself. In the dashboard, above the map you can see a drop down where you can select the device to see the last received location from the selected device in the map.



For more details on the e-Tracker API and for customizing the e-Tracker board please contact us.