

OpenEVSE WiFi (Beta)

Written By: [Christopher Howell](#) (and 5 other contributors)

• Comments: 8

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FEATURED GUIDE

Difficulty

Moderate

Steps

11

Time Required

[Suggest a time??](#)

Sections

1

- [OpenEVSE WiFi \(Beta\)](#) 11 steps

Flags

1

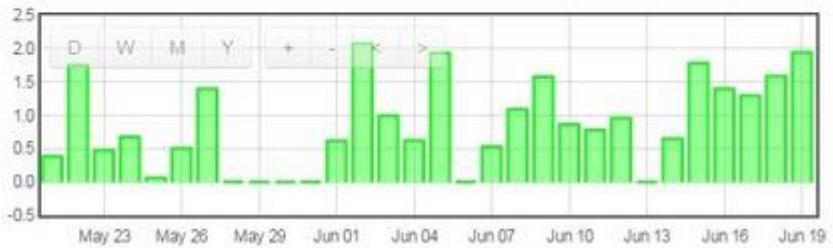
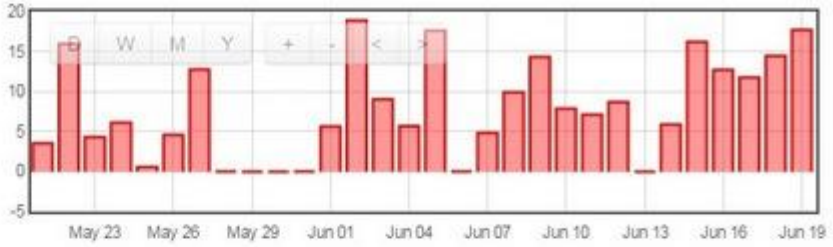
Featured Guide

This guide has been found to be exceptionally cool by the site's staff.

Introduction

Outline what you are going to teach someone how to do.

Step 1_Setup account at OpenEVSE Energy Monitoring site



 **emoncms**
Open-source energy visualisation

Username

Password [Forgot password?](#)

Remember me

or [register](#)



The login page for emoncms (Open-source energy visualisation) includes the following fields and options:

- Username:** A text input field.
- Password:** A text input field with a "Forgot password?" link.
- Remember me:** A checkbox.
- Login:** A blue button.
- or register:** A text link.

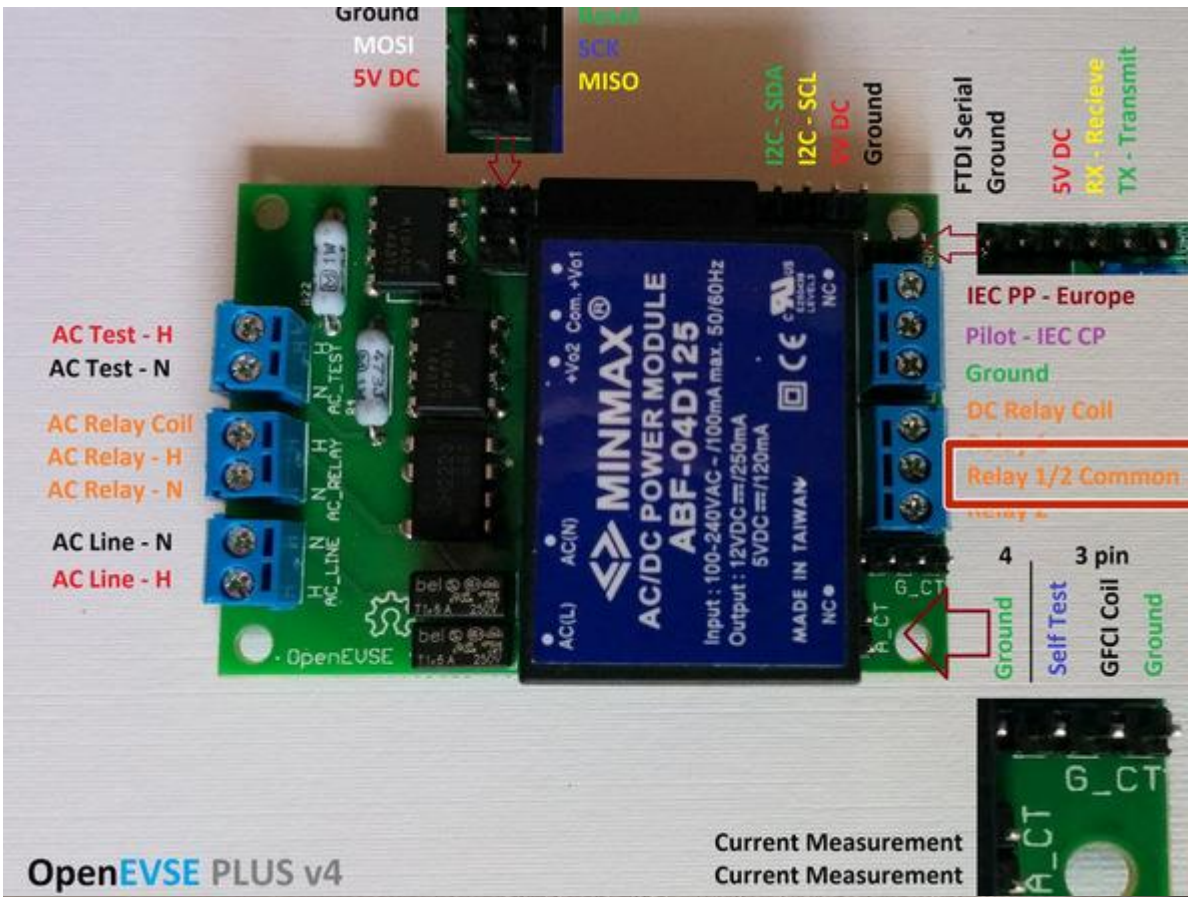
At the bottom of the page, it says: "Powered by openenergymonitor.org | 9.2 | 2015.12.05"

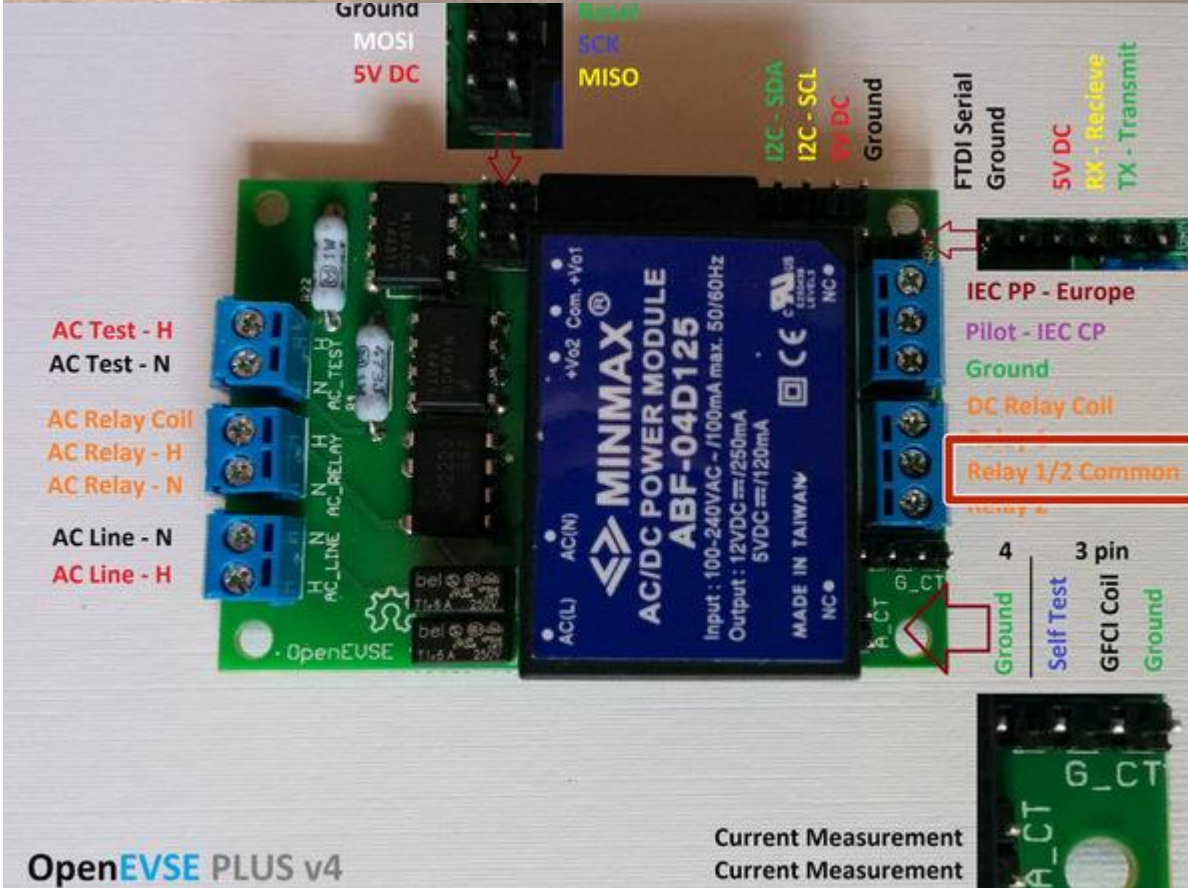
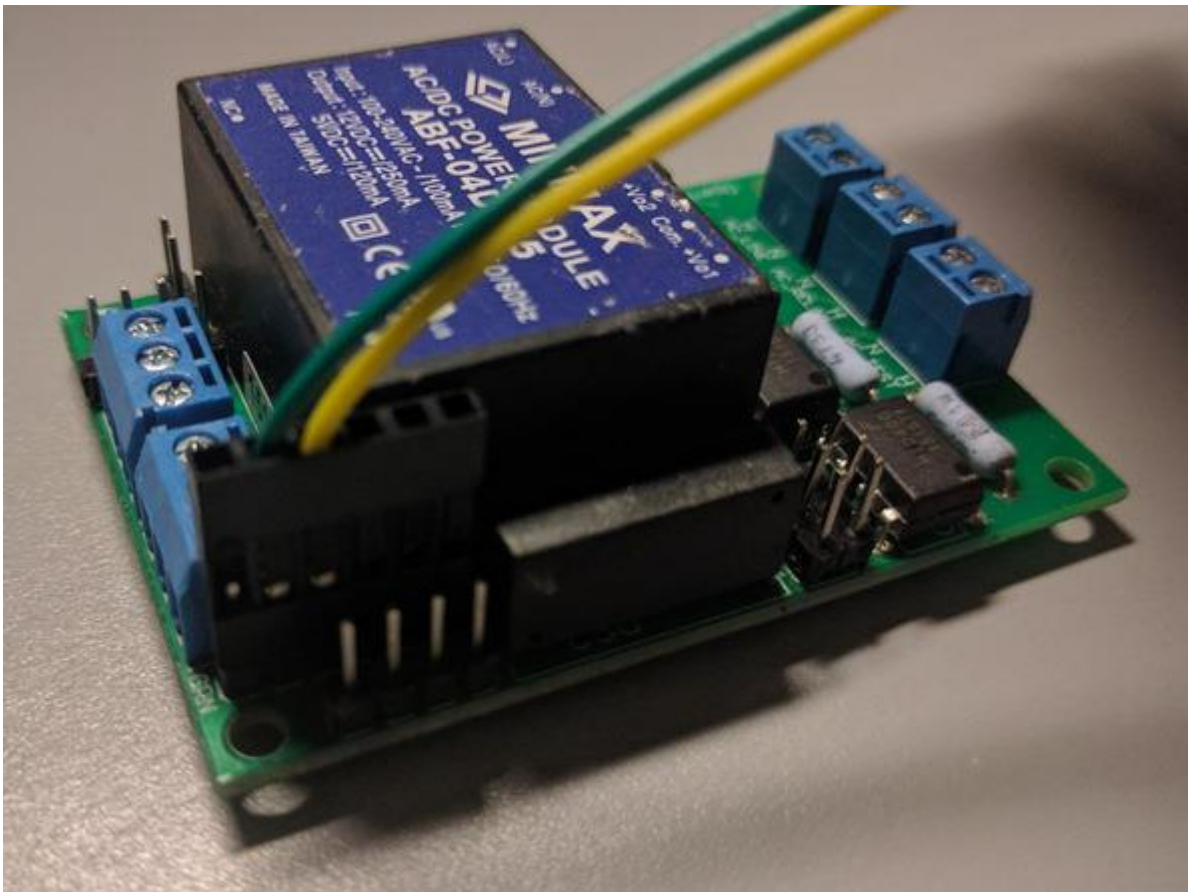
- Setup Free account at: [OpenEVSE Energy Monitoring](https://data.openevse.com/emoncms/user/register)
- Enter Username, Email and Password to register for an Account.

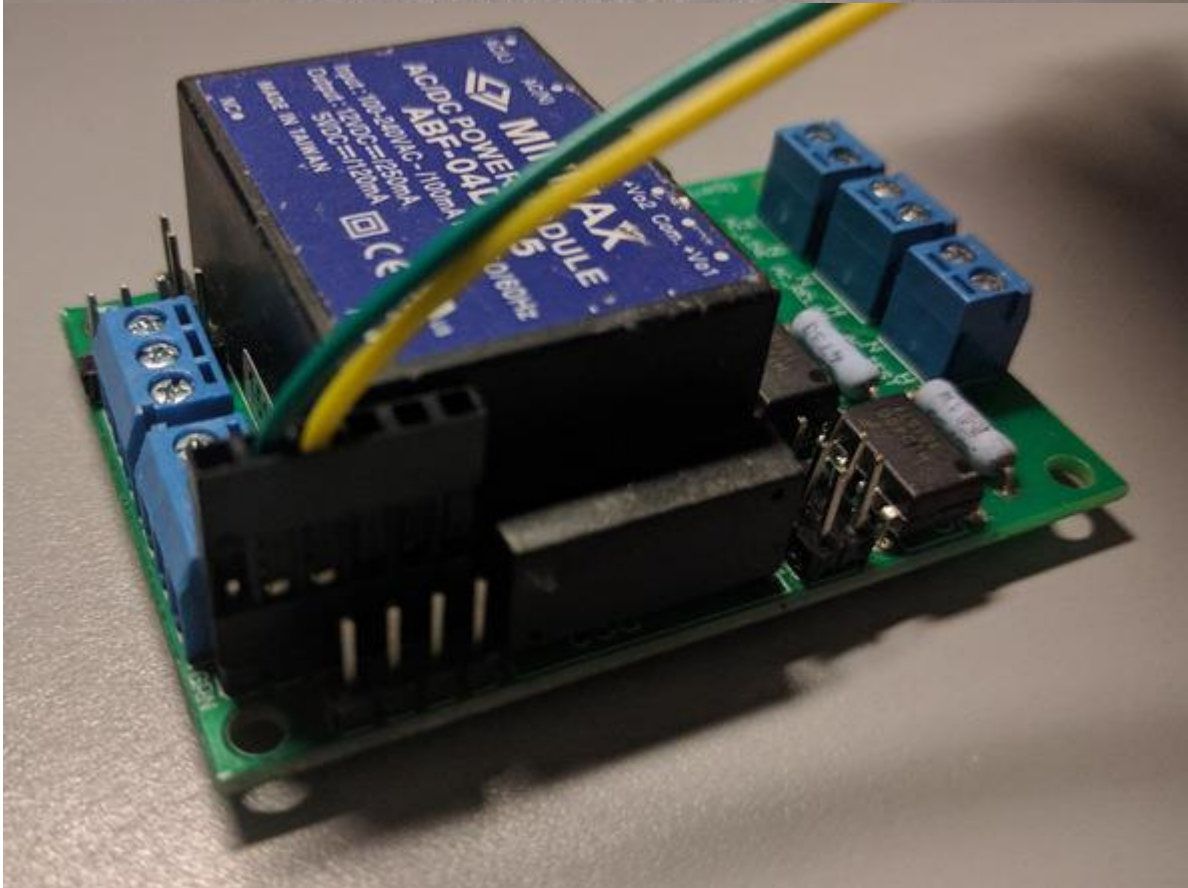
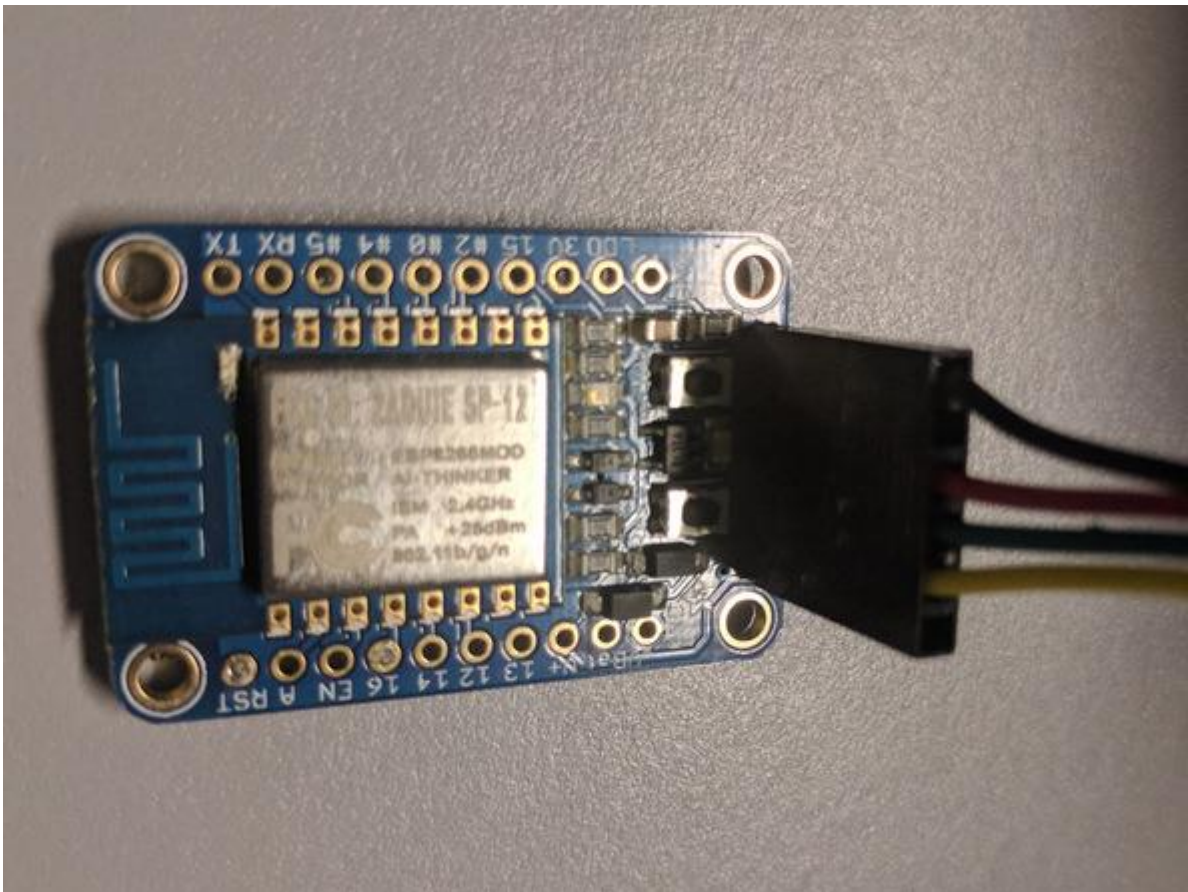
- If using a generic ESP8266 or Huzzah Module without the OpenEVSE Wifi Firmware pre-loaded. Load firmware.
 - [Source Code](#)
 - [Loading code to HUZZAH](#)

One comment

Step 2_Connect Wifi Module to OpenEVSE board





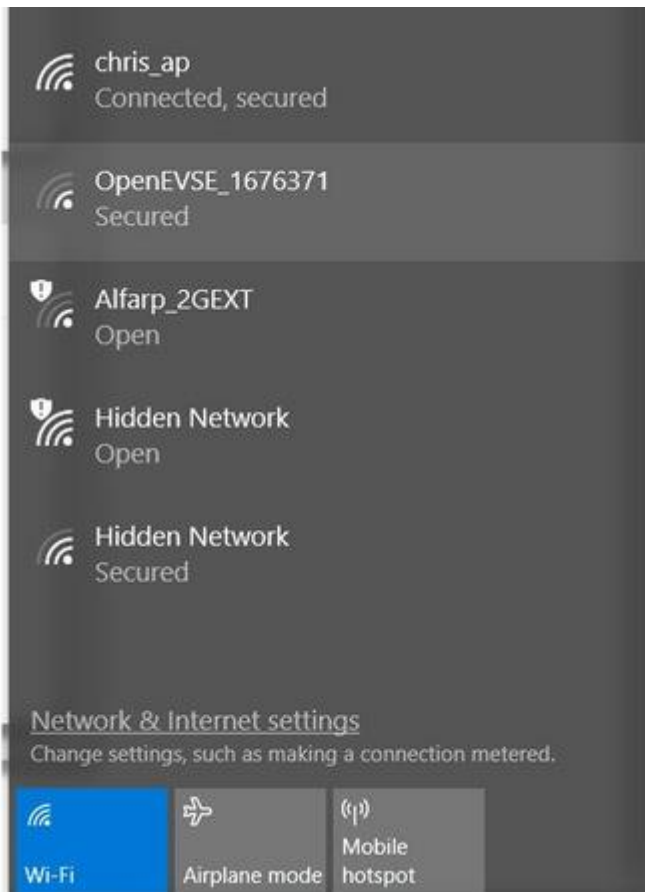


- 1) Connect the **Red (+)** lead of UBEC Power module to the +12v header labeled **RELAY 1/2 Common** . Connect the Black (-) lead to the Ground Block.
- 2) Connect the power and data header (4 of 6 wires) to the Wifi Module.

- **Pin 1** - Ground (Black) **Pin 3** - 5v (Red) - 75ma max (higher power devices must use external power.) **Pin 4** - RX Receive (Green) connects to transmit on OpenEVSE Controller. **Pin 5** - TX Transmit (Yellow) connects to receive on OpenEVSE controller.
- 3) Connect the data only header (2 of 6 wires) to the OpenEVSE Board.
 - From OpenEVSE Controller **Green to TX** , **Yellow to RX**
- 4) Mount the WiFi unit to the desired mount location. Attach the WiFi module to the enclosure.

2 comments

Step 3_Setup WiFi to connect to your network



192.168.4.1

OpenEVSE WIFI

WiFi Setup

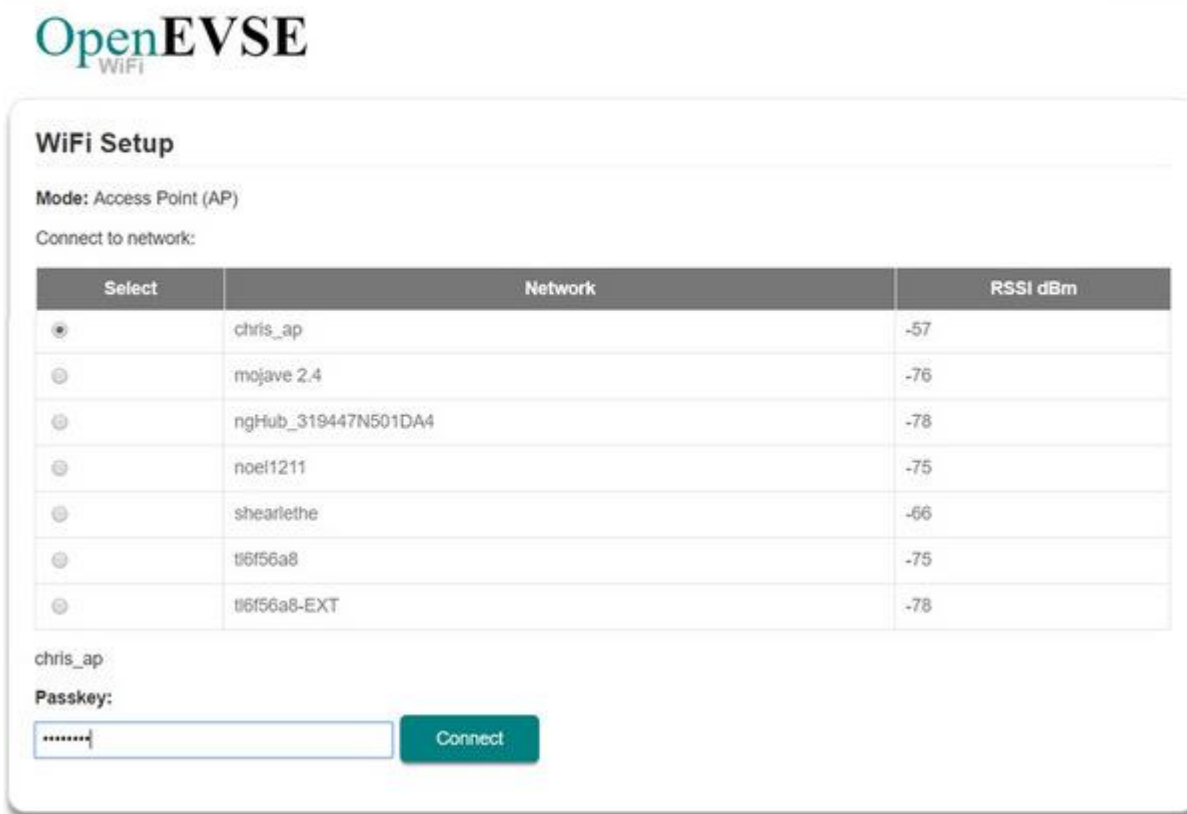
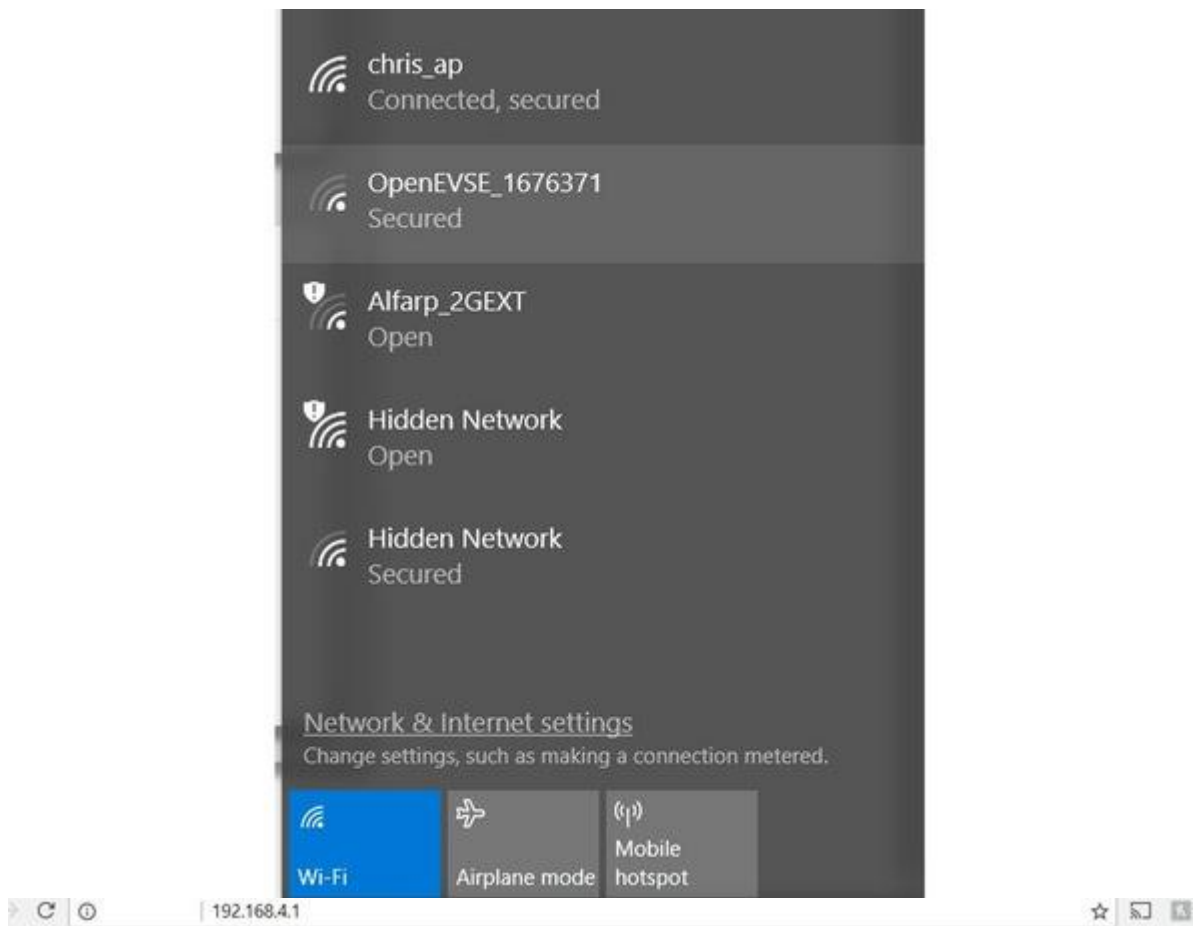
Mode: Access Point (AP)

Connect to network:

Select	Network	RSSI dBm
<input checked="" type="radio"/>	chris_ap	-57
<input type="radio"/>	mojave 2.4	-76
<input type="radio"/>	ngHub_319447N501DA4	-78
<input type="radio"/>	noel1211	-75
<input type="radio"/>	shearithe	-66
<input type="radio"/>	ti6f56a8	-75
<input type="radio"/>	ti6f56a8-EXT	-78

chris_ap

Passkey:



- Power on OpenEVSE WiFi to configure the WiFi Module. Using a laptop or phone connect OpenEVSE WiFi:
 - SSID: OpenEVSE_XXXXXXX where X is a random digit --- Password: openevse

- **Address:** 192.168.4.1 **Default Username:**admin **Password:** openevse
- Select the SSID and enter the Password of **YOUR** WiFi network.
- Click Connect

One comment

Step 4_Service - Energy Monitoring



Energy Monitoring

Enable Emoncms

Emoncms Server*:

data.openevse.com/emoncms

e.g. data.openevse.com/emoncms emoncms.org emonpi/emoncms

Emoncms Node*:

0

Emoncms write-apikey*:

Emoncms SSL SHA-1 Fingerprint (optional):

HTTPS will be enabled if present e.g.

7D:82:15:BE:D7:BC:72:56:87:7D:8E:40:D4:80:BA:1A:9F:8B:8D:DA

Save

Connected: Yes Successful posts: 6

data.openevse.com/emoncms/device/view

Devices

Devices Help

Name	Location	Node	Type	Device access key	Updated	
OpenEVSE	Garage Leaf	0	OpenEVSE	49a521bb7fc8e4f65c3edac518342ca3	n/a	

[New device](#)

OpenEVSE System Services

Energy Monitoring

Enable Emoncms

Emoncms Server*:
data.openevse.com/emoncms
e.g. data.openevse.com/emoncms emoncms.org emonpi/emoncms

Emoncms Node*:
0

Emoncms write-apikey*:

Emoncms SSL SHA-1 Fingerprint (optional):

HTTPS will be enabled if present e.g.
7D:82:15:BE:D7:BC:72:56:87:7D:8E:40:D4:80:BA:1A:9F:8B:8D:DA

Save Connected: Yes Successful posts: 6

data.openevse.com/emoncms/device/view

Devices

Devices Help

Name	Location	Node	Type	Device access key	Updated	
OpenEVSE	Garage Leaf	0	OpenEVSE	49a521bb7fc8e4f65c3edac518342ca3	n/a	  

[New device](#)

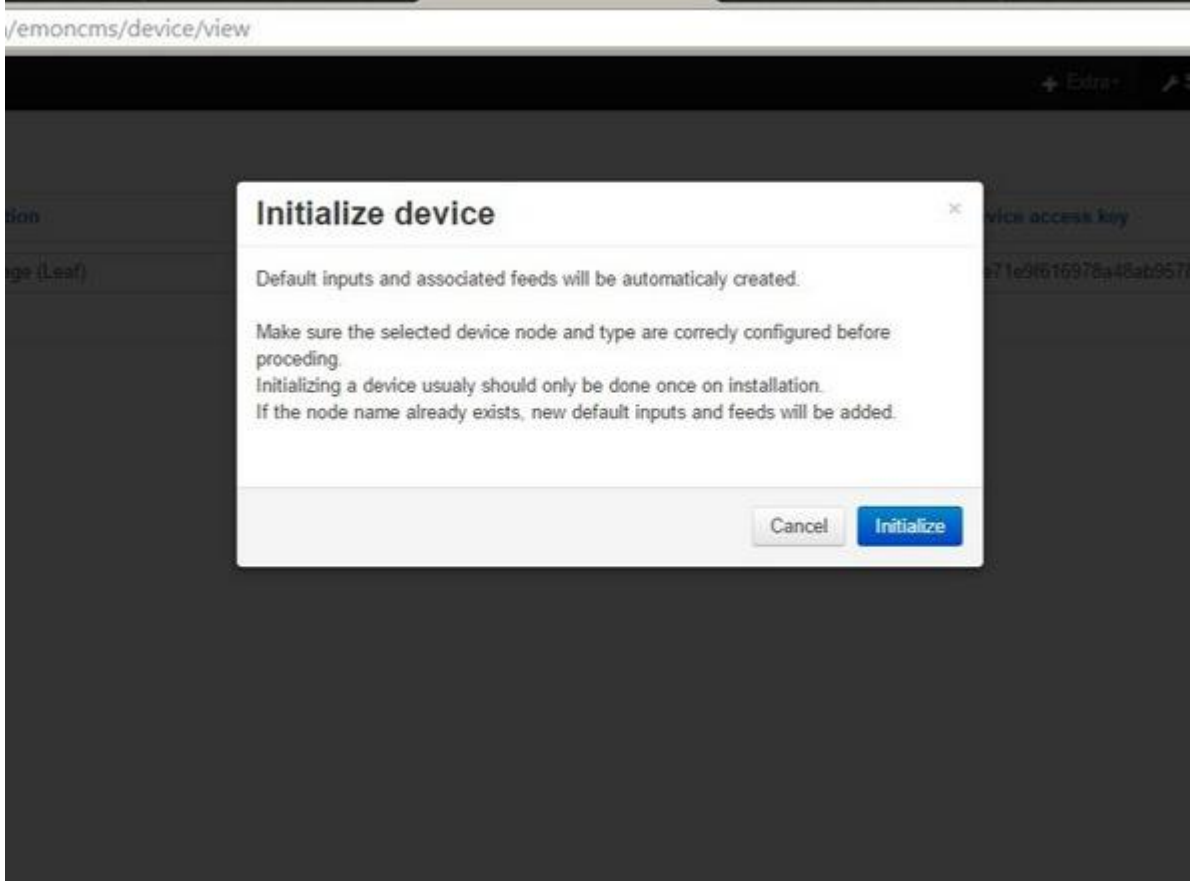
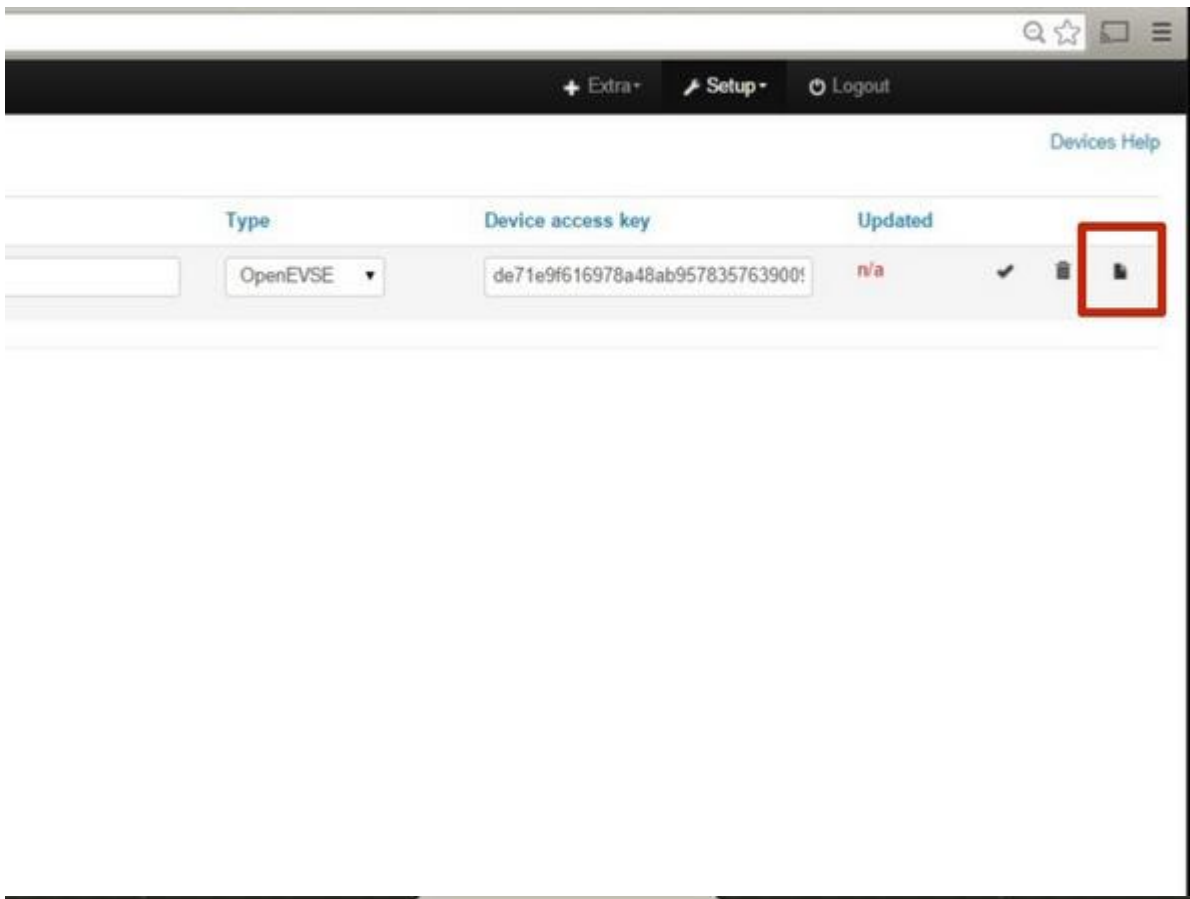
- OpenEVSE WiFi can send energy data to the Open Energy Monitor Service (EmonCMS). You can configure:
 - Default - OpenEVSE Servers at data.openevse.com/emoncms

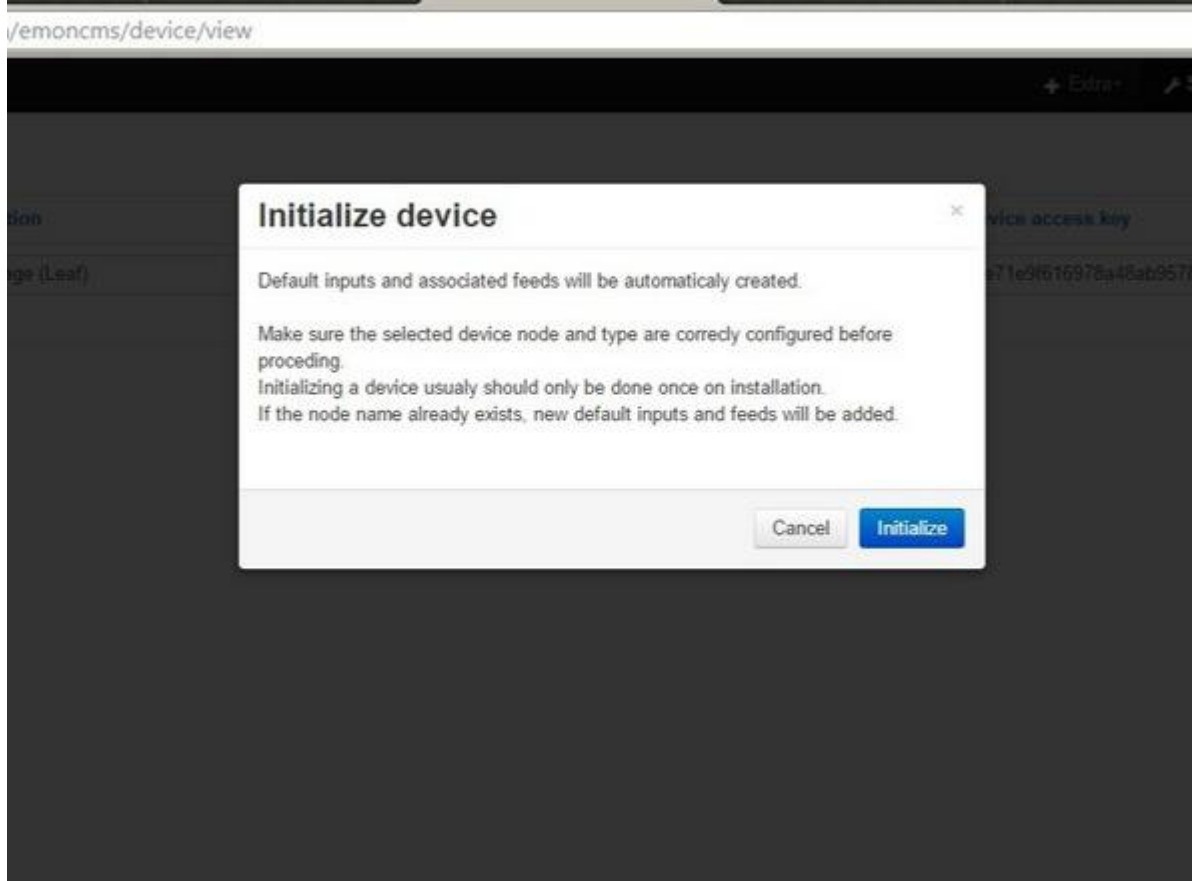
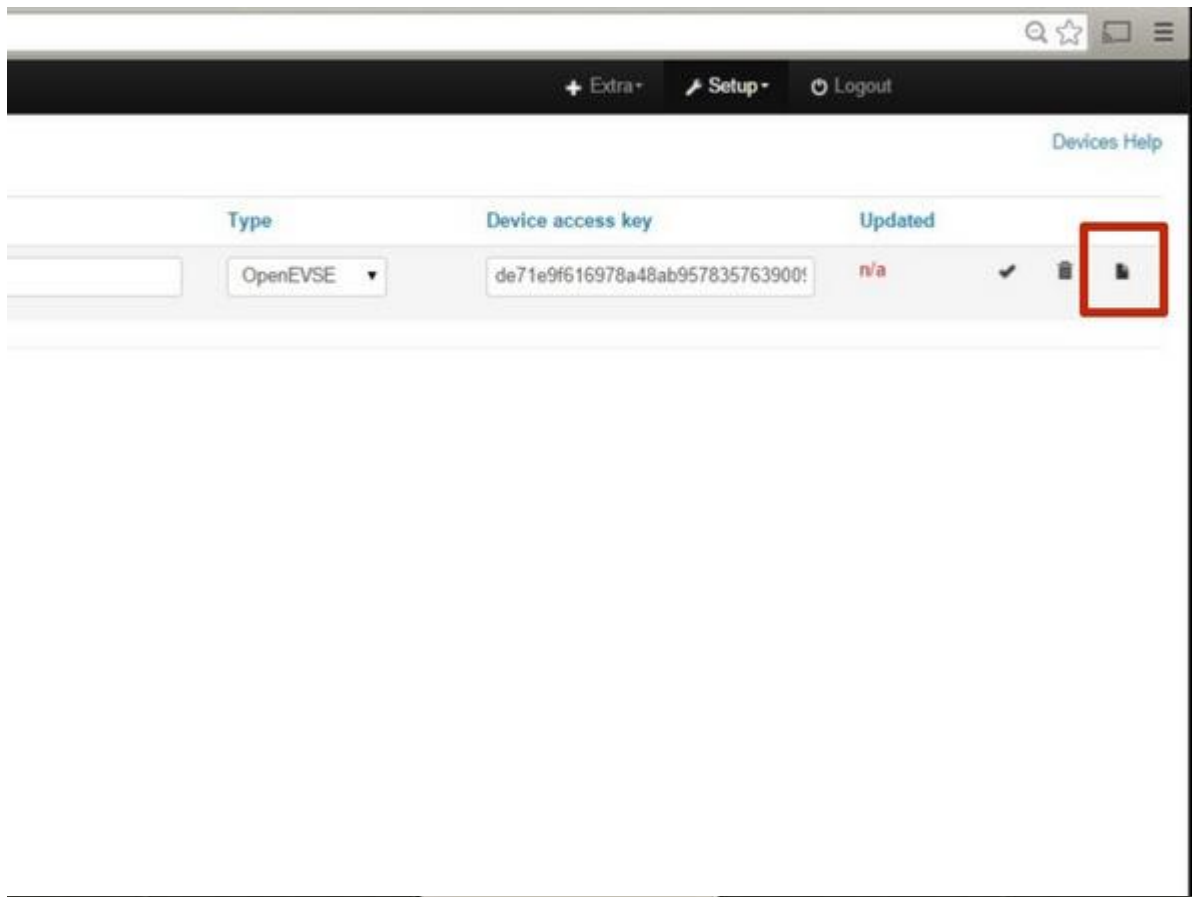
- Optional - Open Energy Monitor Servers at: emoncms.org
- Optional - If you prefer not to use an internet based service and keep data locally. You may setup your own EmonCMS setup using a EmonPi.
- Click "Enable EmonCMS" in the services tab.
- Login to EmonCMS at <https://data.openevse.com/emoncms> . Click Setup (wrench Icon)
=> Device Setup
 - Set node (0 - 9 Reccomended) on both WiFi and "Devices" on Server.
 - Copy Device Key from EmonCMS to WiFi.

Add a comment

Post comment

Step 5_Setup Energy Monitoring -- Feeds (Automatic)





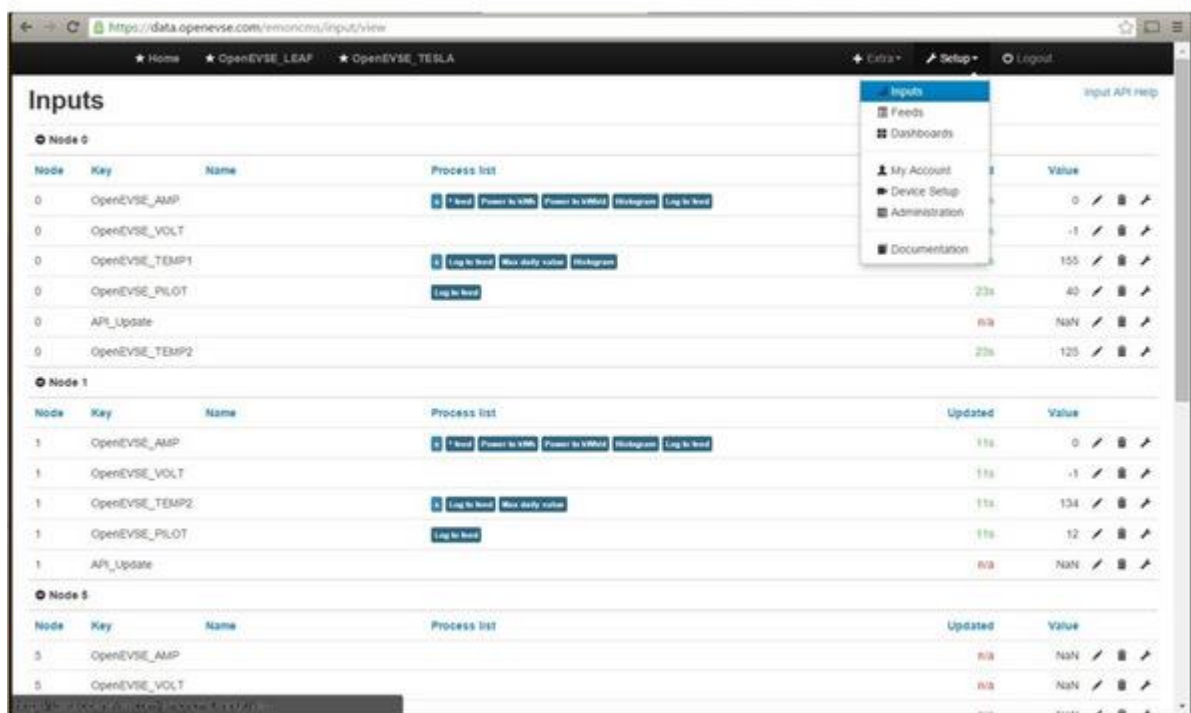
- To automatically Setup Inputs and Feeds:
 - Navigate to Setup => Device Setup
 - Click the Paper Icon to Initialize the Device.

- Click Initialize to confirm.
- Inputs and Feeds should now be setup.

Add a comment

Post comment

Step 6_Energy Monitoring -- Inputs



- Go back to [OpenEVSE Energy Monitoring](#)
 - Select Inputs - Navigate to Setup => Inputs. The Inputs section should now display live data from OpenEVSE.
 - Inputs from other sensors can be included such as additional current, temperature, humidity, voltage etc. See [Open Energy Project](#)
- Inputs displays live data from the sensors. This data is not stored, logged or archived.

Add a comment

Post comment

Step 7_Email Notifications (optional)

Inputs

Node0 : Tesla_AMP process list setup

Processes are executed sequentially with the result value being passed down for further processing to the next processor on this processing list.

Order	Process	Arg	Actions	
↓	1	x	0.001	✎ 🗑
↑↓	2	* feed	Node:10: node:10-5_240 (feed last value:242.08)	✎ 🗑
↑↓	3	Power to kWh	Node:0: Tesla_Current (feed last value:0.00)	✎ 🗑
↑↓	4	Power to kWh/d	Node:0: Tesla_Current (feed last value:0.00)	✎ 🗑
↑↓	5	Log to feed	Node:0: Tesla_Current (feed last value:0.00)	✎ 🗑
↑↓	6	If rate >=, skip next	1	✎ 🗑
↑↓	7	GOTO	99	✎ 🗑
↑↓	8	If =, skip next	0	✎ 🗑
↑↓	9	GOTO	99	✎ 🗑
↑	10	Send Email	OpenEVSE has stopped charging at (time)	✎ 🗑

Close Saved

Powered by

Inputs

Node0 : Tesla_Temp process list setup

Processes are executed sequentially with the result value being passed down for further processing to the next processor on this processing list.

Order	Process	Arg	Actions	
↓	1	x	0.1	✎ 🗑
↑↓	2	Log to feed	Node:0: node:0:OpenEVSE_TEMP1 (feed last value:27.50)	✎ 🗑
↑↓	3	If >=, skip next	65	✎ 🗑
↑↓	4	GOTO	99	✎ 🗑
↑↓	5	If !Mute, skip next	300	✎ 🗑
↑↓	6	GOTO	99	✎ 🗑
↑	7	Send Email	OpenEVSE: temperature (value) C at (time) UTC	✎ 🗑

Add process:

Send Email Text OpenEVSE temperature (value) C Add

Send an email to the user with the specified body

Close Saved

Node0 : Tesla_AMP process list setup

Processes are executed sequentially with the result value being passed down for further processing to the next processor on this processing list.

Order	Process	Arg	Actions	
↓	1	x	0.001	✎ 🗑
↑↓	2	* feed	Node:10: node:10:5_240 (feed last value:242.08)	✎ 🗑
↑↓	3	Power to kWh	Node:0: Tesla_Current (feed last value:0.00)	✎ 🗑
↑↓	4	Power to kWh/d	Node:0: Tesla_Current (feed last value:0.00)	✎ 🗑
↑↓	5	Log to feed	Node:0: Tesla_Current (feed last value:0.00)	✎ 🗑
↑↓	6	If rate >=, skip next	1	✎ 🗑
↑↓	7	GOTO	99	✎ 🗑
↑↓	8	If =, skip next	0	✎ 🗑
↑↓	9	GOTO	99	✎ 🗑
↑	10	Send Email	OpenEVSE has stopped charging at (time)	✎ 🗑

Close Saved

Node0 : Tesla_Temp process list setup

Processes are executed sequentially with the result value being passed down for further processing to the next processor on this processing list.

Order	Process	Arg	Actions	
↓	1	x	0.1	✎ 🗑
↑↓	2	Log to feed	Node:0: node:0:OpenEVSE_TEMP1 (feed last value:27.50)	✎ 🗑
↑↓	3	If >=, skip next	65	✎ 🗑
↑↓	4	GOTO	99	✎ 🗑
↑↓	5	If !Mute, skip next	300	✎ 🗑
↑↓	6	GOTO	99	✎ 🗑
↑	7	Send Email	OpenEVSE: temperature (value) C at (time) UTC	✎ 🗑

Add process:

Send Email Text OpenEVSE temperature (value) C Add

Send an email to the user with the specified body

Close Saved

- The OpenEVSE energy monitoring server supports powerful input processing and can send E-mails bases on flexible logic.

- Example 1 - Send E-mail when Charging is complete. Add the values in the red box to the OpenEVSE_AMP input. Logic: If the value is changing and now equals 0 then send an Email. If not Goto the end "99".
- Example 2 - Send E-mail every 5 minutes when temperature exceeds 65C. Add the values in the Blue box to the active Temp input. Logic If temperature is greater than 65C and 300 seconds have passed (5 minutes) Send an Email with the current temperature.

One comment

Step 8_Setup Energy Monitoring -- Dashboards

Browser address bar: <https://data.openevse.com/emoncms/dashboard/list>

Navigation: Home | OpenEVSE_LEAF | OpenEVSE_TESLA | Extra | Setup | Logout

Dashboards

Id	Name	Alias	Main	Public	Published	
1	Home		★	🔒	✓	✕
2	OpenEVSE_LEAF		★	🔒	✓	✕
3	OpenEVSE_TESLA		★	🔒	✓	✕

[New](#)

- Inputs
- Feeds
- Dashboards**
- My Account
- Device Setup
- Administration
- Documentation

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

Browser tabs: Emoncms | Emoncms | Editing OpenEVSE WiFi

Browser address bar: data.openevse.com/emoncms/dashboard/view#

Navigation: Input | Feeds | Vis | Dashboard | Admin | Account | Logout | Docs

Dashboards:

Dashboard

Id	Name	Alias	Main	Public	Published	
3	OpenEVSE		★	🔒	✕	✕    

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https://data.openevse.com/emoncms/dashboard/list

Home OpenEVSE_LEAF OpenEVSE_TESLA Extra Setup Logout

Dashboards

Id	Name	Alias	Main	Public	Published	
1	Home		★	🔒	✓	✕
2	OpenEVSE_LEAF		★	🔒	✓	✕
3	OpenEVSE_TESLA		★	🔒	✓	✕

+ New

Inputs
Feeds
Dashboards
My Account
Device Setup
Administration
Documentation

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data.openevse.com/emoncms/dashboard/view#

Input Feeds Vis Dashboard Admin Account Logout Docs

Dashboards:

Dashboard

Id	Name	Alias	Main	Public	Published	
3	OpenEVSE		★	🔒	✕	✕ ✎ 🗑️ 📄 👁️

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- Dashboards display data logged from the feeds. You can create as many dashboard views as you wish.
- Click on the + icon to create your first Dashboard.

- The name can be edited by clicking on the pencil icon.

Add a comment

Post comment


Step 9_Setup Dashboard - Dial

Text Containers Widgets Visualisations

- bar
- button
- cylinder
- dial
- feedvalue
- jgauge
- led
- stack

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Text Containers Widgets Visualisations **Configure** Delete Change



Configure element

Feed: Feed value

Max value: Max value to show

Scale: Value is multiplied by scale before display

Units: Units to show

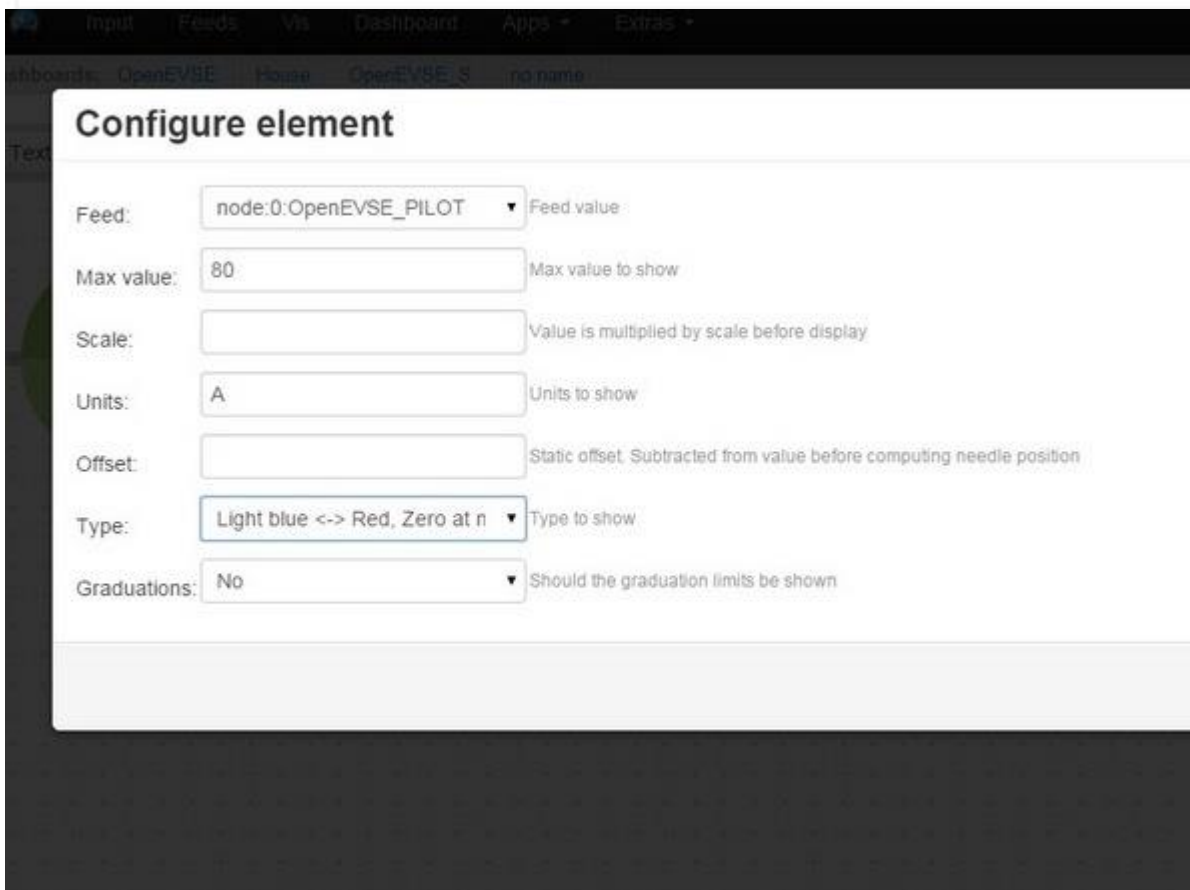
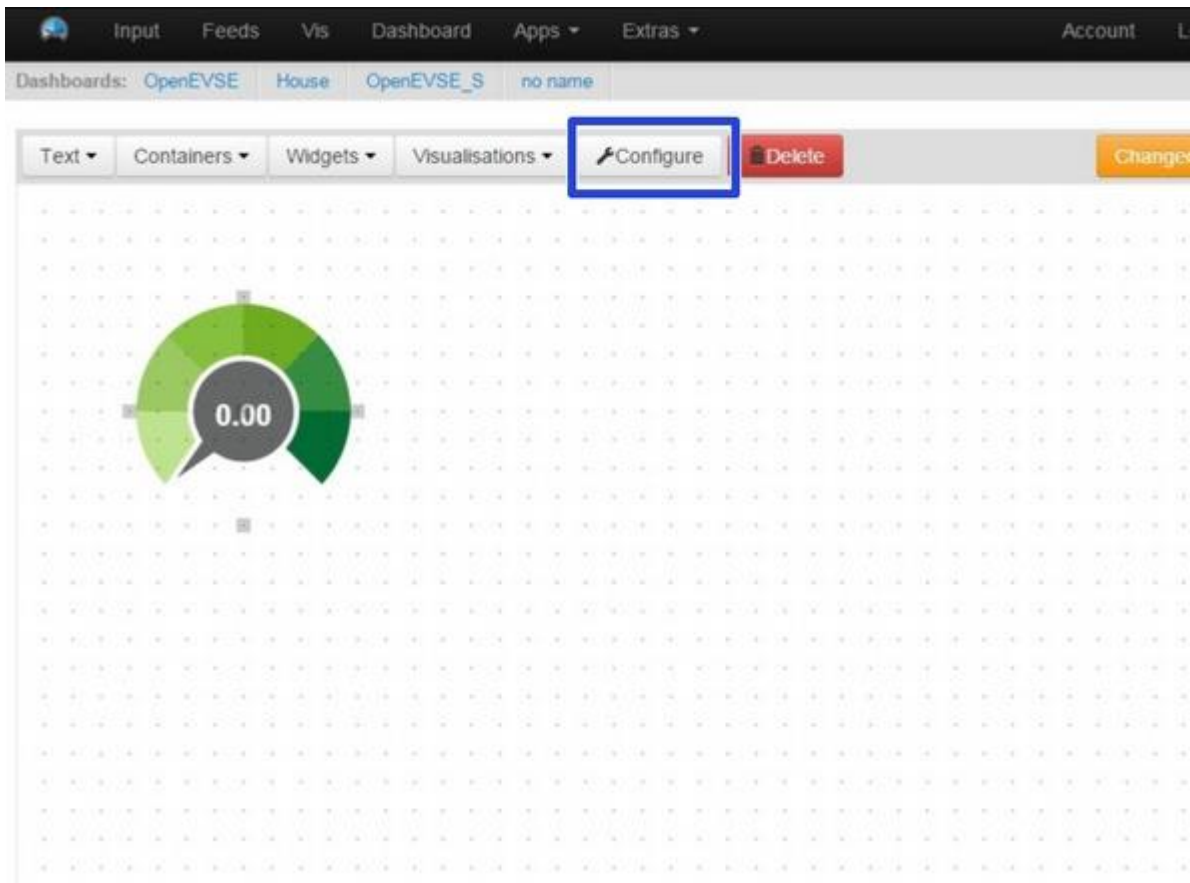
Offset: Static offset. Subtracted from value before computing needle position

Type: Type to show

Graduations: Should the graduation limits be shown

Text Containers Widgets Visualisations

- bar
- button
- cylinder
- dial
- feedvalue
- jgauge
- led
- stack



- Select Widgets > Dial
- Click on grid to place the dial. Move, re-size and adjust as desired.
- Click "Configure"

- Select Feed - Set Max Value - Set Units - Pick Type

Add a comment

Post comment

Step 10_Setup Dashboard - Rawdata


-
-

data.openevse.com/emoncms/dashboard/edit?id=3

Input Feeds Vis Dashboard

Dashboards: Home OpenEVSE_Tesla OpenEVSE_Leaf OpenEVSE_Portable

Text Containers Widgets Visualisations Configure Delete



- realtime
- rawdata**
- bargraph
- zoom
- simplezoom
- histgraph
- threshold
- orderthreshold
- orderbars
- stacked
- stackedsolar
- smoothie
- multigraph

data.openevse.com/emoncms/dashboard/edit?id=3

Feeds Vis Dashboard

Home OpenEVSE_Tesla OpenEVSE_Leaf OpenEVSE_Portable

Containers Widgets Visualisations

Configure element

Feed: 1: node:0:OpenEVSE_AMP Feed source

Colour: Line colour in hex. Blank is use default.

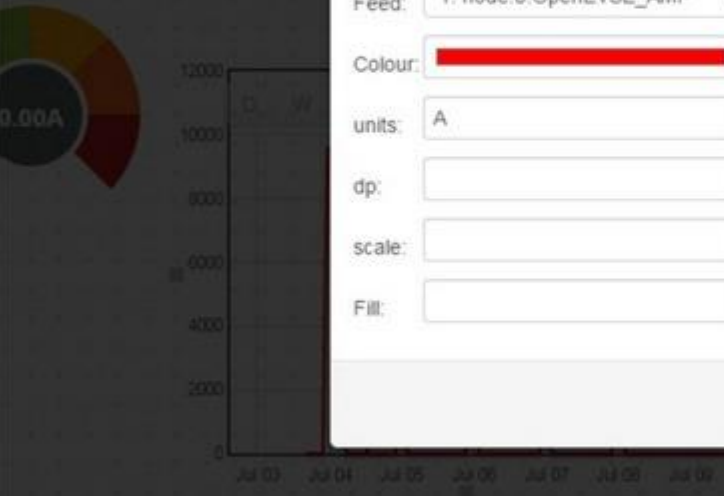
units: A units

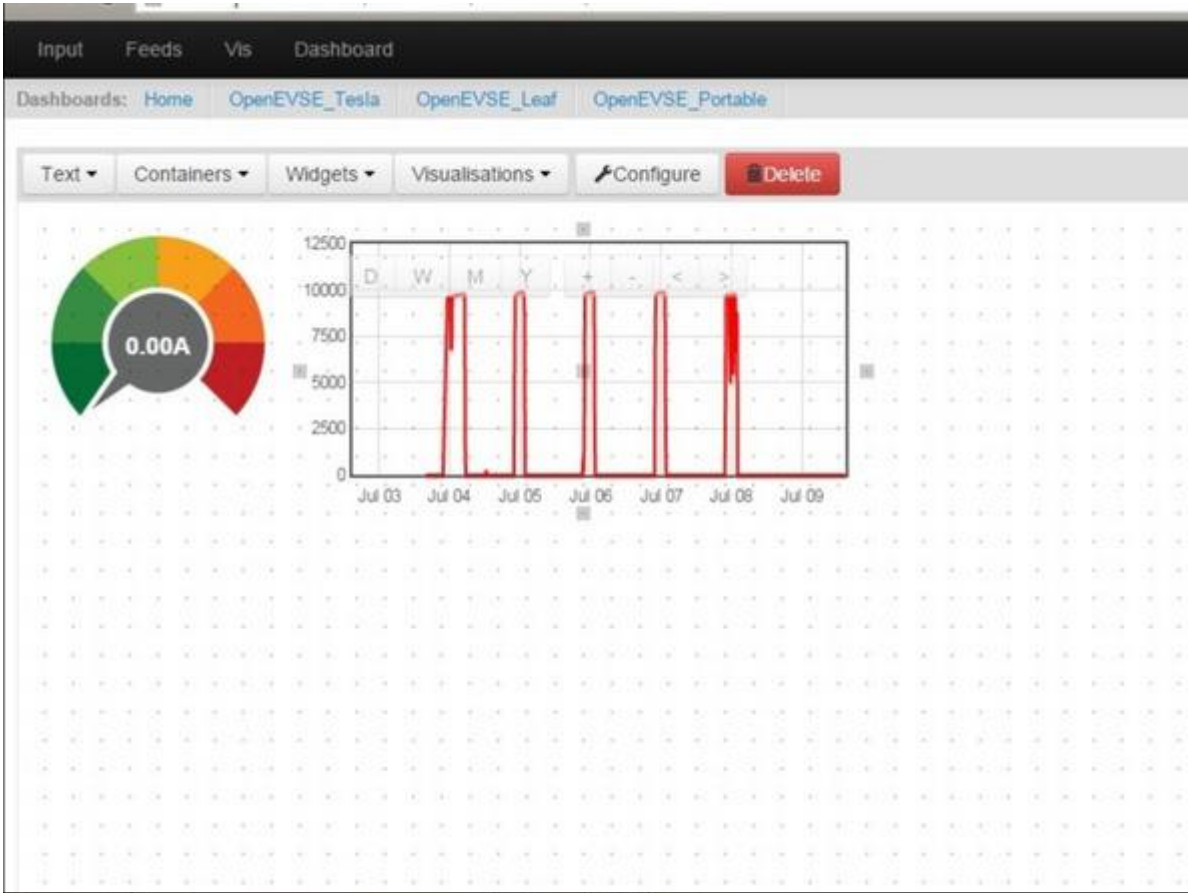
dp: Decimal points

scale: Scale by

Fill: Fill value

Cancel Save changes





← → ↻ data.openevse.com/emoncms/dashboard/edit?id=3

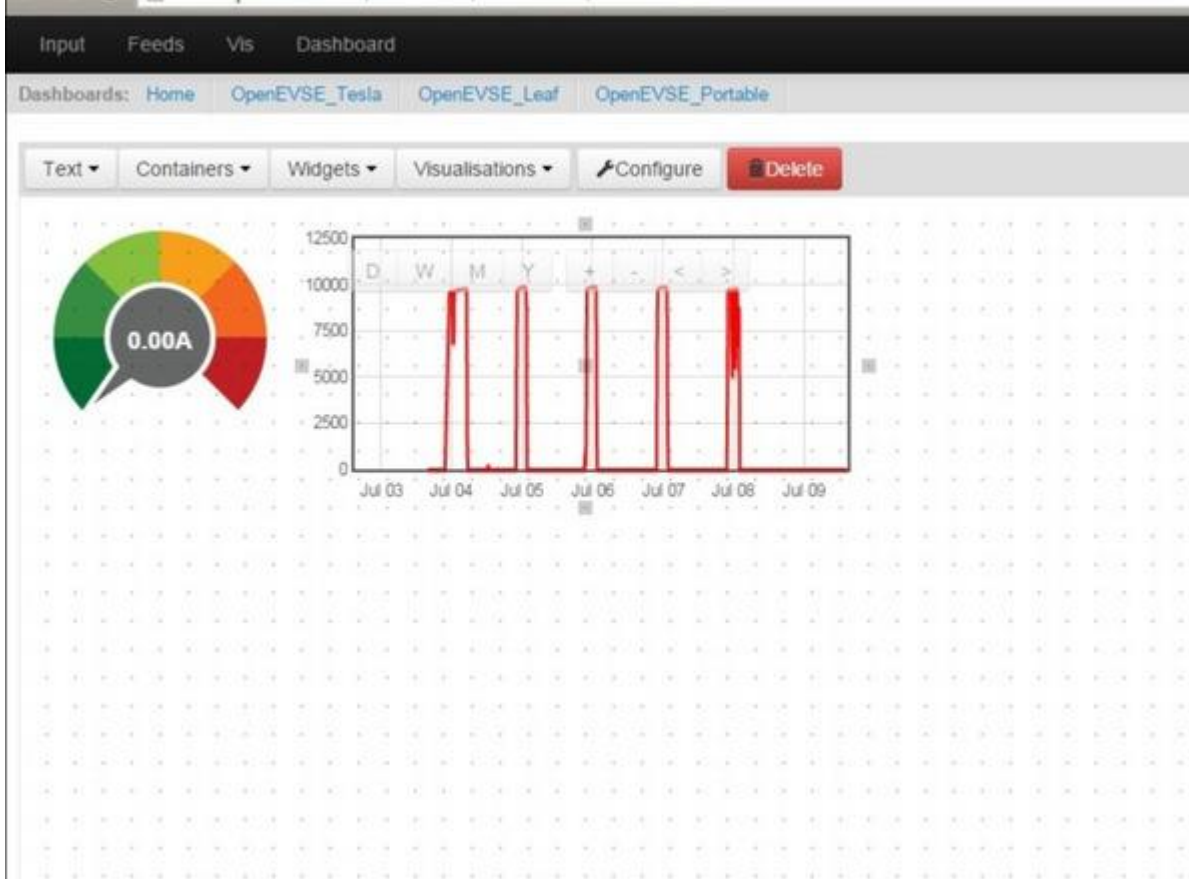
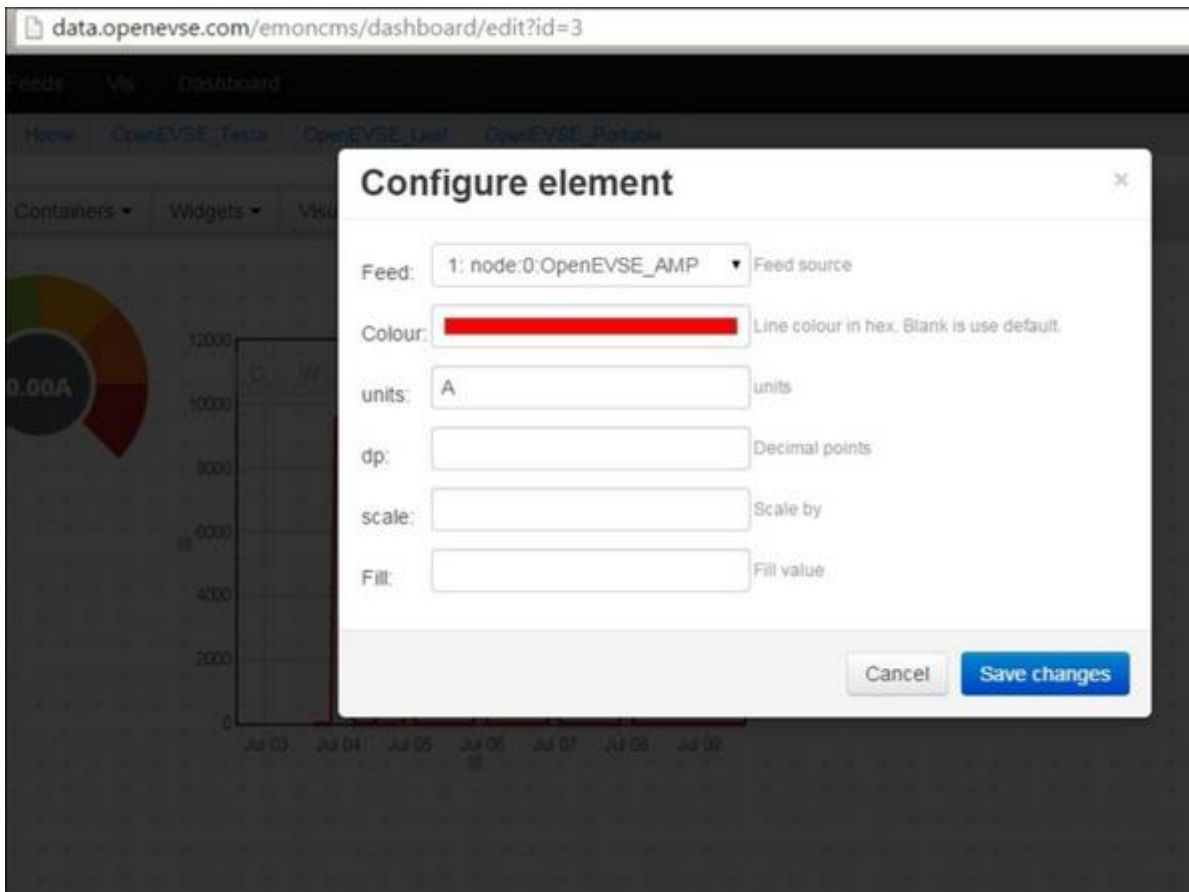
Input Feeds Vis Dashboard

Dashboards: [Home](#) [OpenEVSE_Tesla](#) [OpenEVSE_Leaf](#) [OpenEVSE_Portable](#)

Text Containers Widgets Visualisations [Configure](#) [Delete](#)

The dashboard is in an edit mode. The gauge on the left still shows 0.00A. A dropdown menu is open under the 'Visualisations' tab, listing various visualization types. The 'rawdata' option is currently selected and highlighted in blue.

- realtime
- rawdata**
- bargraph
- zoom
- simplezoom
- histgraph
- threshold
- orderthreshold
- orderbars
- stacked
- stackedsolar
- smoothie
- multigraph



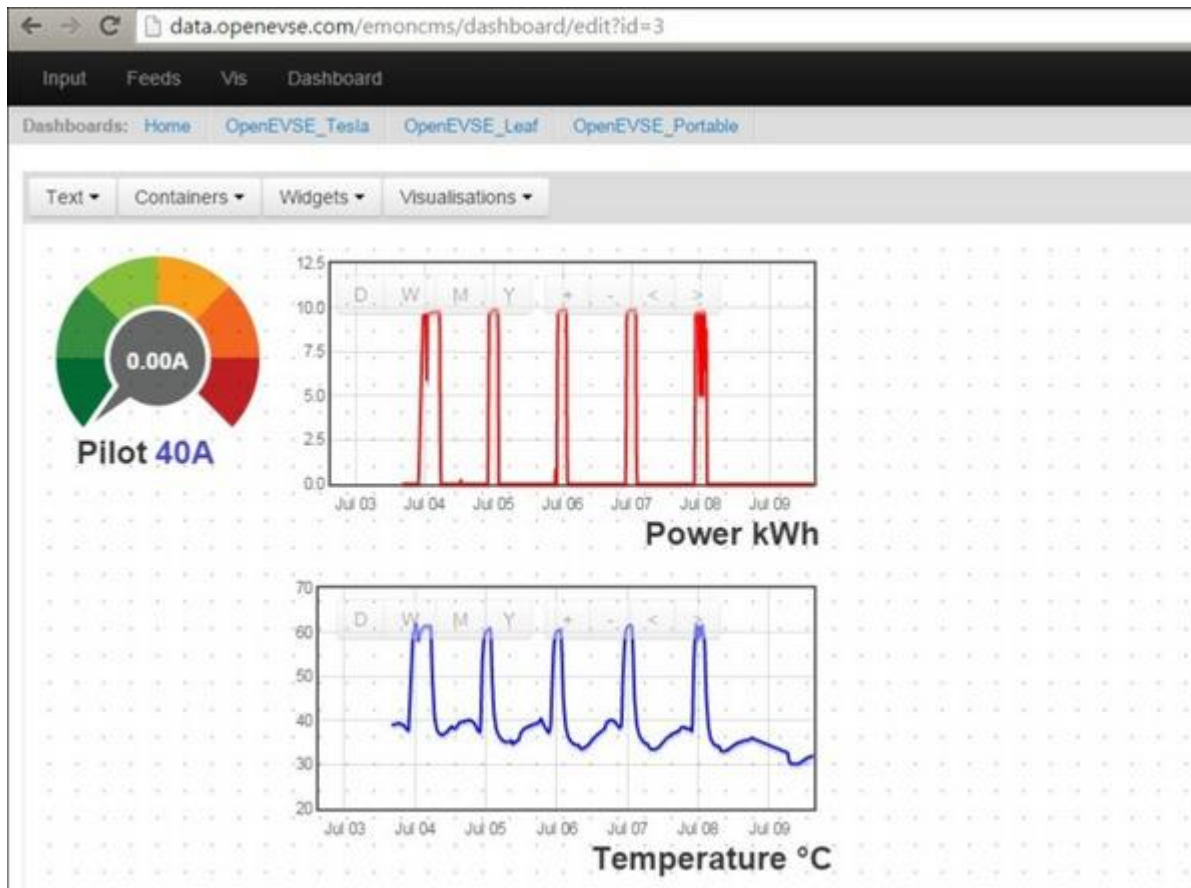
- Add Rawdata charts for current and temprature. Click on Visualizations > Rawdata. Click on the grid to add click then Configure.
- Select Feed, Color and Units

- Move and scale as desired.
- Save Changes

Add a comment

Post comment

Step 11_Setup Dashboard - Add text and Feed Values



- Add Text Labels
- Feed values can be displayed. Click Widget > Feedvalue