

Self Hosted Data Logger for Arduino

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1 Preface

I did some research on available self hosted solutions for Arduino, as of January 2019. I was thinking of using Thingspeak, but they haven't updated their self hosted git repo since 2016. Adafruit.io is the same but 2017¹. Sparkfun closed down their solution.² It seems the other data aggregators are only interested in people giving them data, so they can then sell it, hoard it like wealth, etc... Another solution is necessary.

2 Plan

Since I've done some data logging with GNUplot before, I've decided to use a flat text file, and csv output. I don't want to deal with MQTT, as this is in a safe LAN (not over WAN), and security is no issue. I also don't want the clients to do any sending. They are stupid, they sit there, and the server is responsible for data collecting. Simple.

What I will do, as I've already started doing, is hosting a web server on the microcontroller, which has amongst other things, sensor data available. The server will pull data from the sensor, and place it into a flat file. GNUplot will run via cron scripts, and the server will host various jpgs. Let's see how this goes.

3 Implementation

Ingredients

- SBC (Beaglebone, Rpi)

¹And uses node.js :/

²Apparently they have no idea what they are doing, and their solution inevitably blew up. Bloated software...

- Network Connected Sensors
- Time