Data transfer to the dveet.io platform

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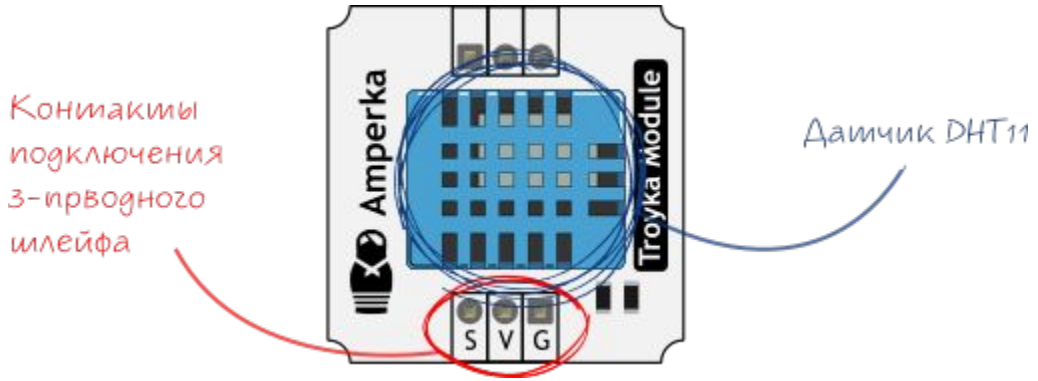
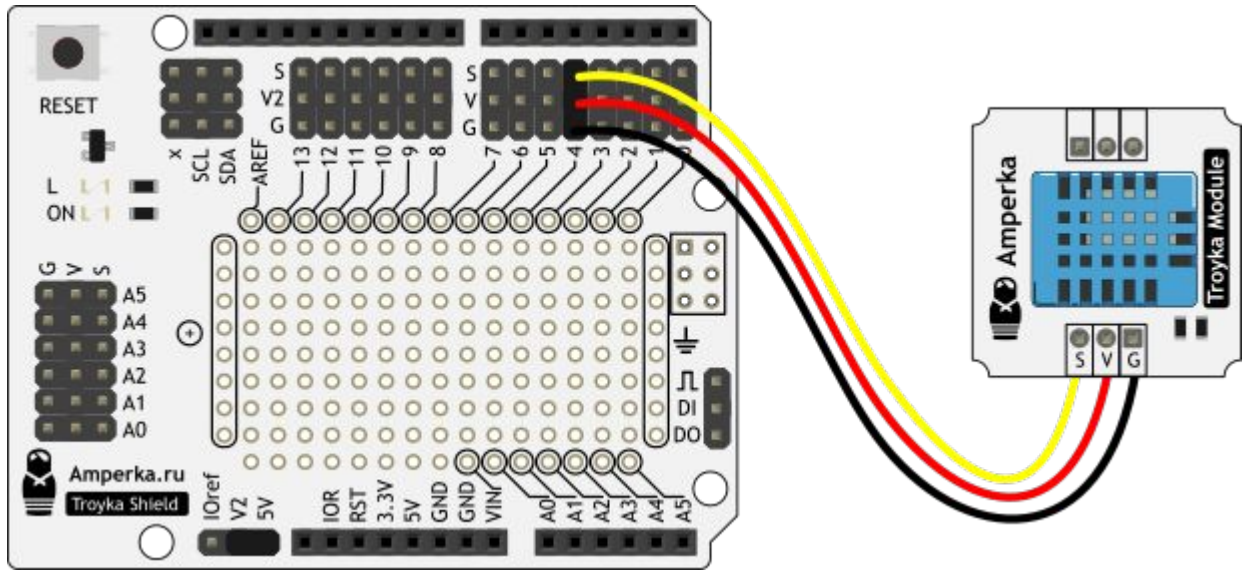
Temperature and humidity sensor

- The DHT11 digital sensor is a composite sensor that provides a calibrated digital signal with temperature and humidity readings.
- The sensor includes a resistive humidity measuring component and a negative temperature coefficient (NTC) temperature measuring component, which are connected to a high-performance 8-bit microcontroller.



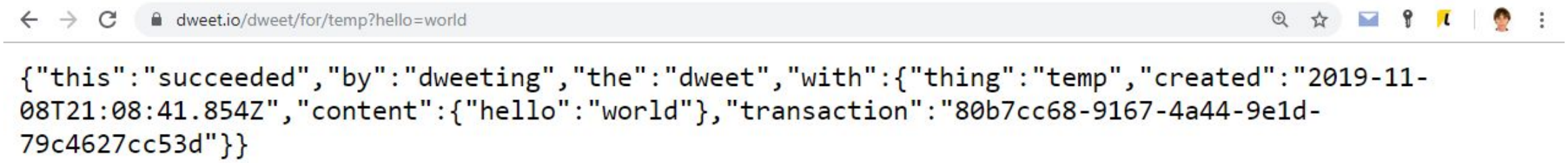
DHT sensor protocol

The sensor output is a digital signal. Temperature and humidity are transmitted over one signal wire (S). DHT11 communicates with a host like Arduino using its own protocol.



Creating a device for the dweet.io platform

Link: https://dweet.io/dweet/for/temp?hello=world



Creating a control program

- Library for working with the sensor (if it is not installed, it must be added)

#include <TroykaDHT.h>

- Add the pin number to which the sensor is connected:

DHT dht(4, DHT11);

- We start the sensor in the section void setup()

dht.begin();

- Reading data from the sensor in the section void loop()

dht.read();

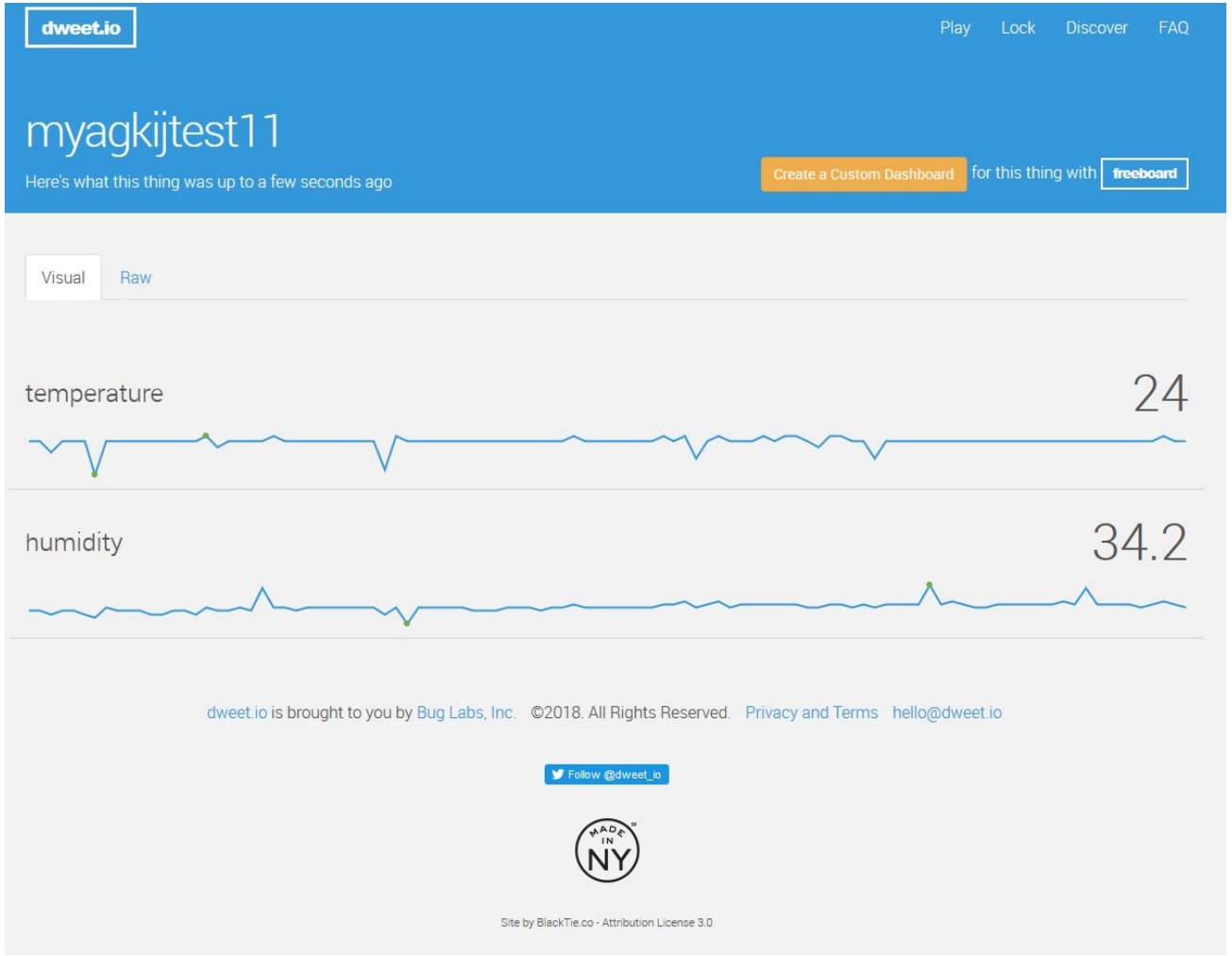
Creating a control program

- Displaying temperature readings in Celsius, Kelvin and Fahrenheit; (section void httpRequest())

```
client.println(String ("POST /dweet/for/garden?Light=") + String
(sensorLight.getLightLux()) + String ("&C=") + String
(dht.getTemperatureC()) + String ("&K=") + String
(dht.getTemperatureK()) + String ("&F=") + String
(dht.getTemperatureF()));
```

Assignment

- Display temperature sensor readings on dweet.io



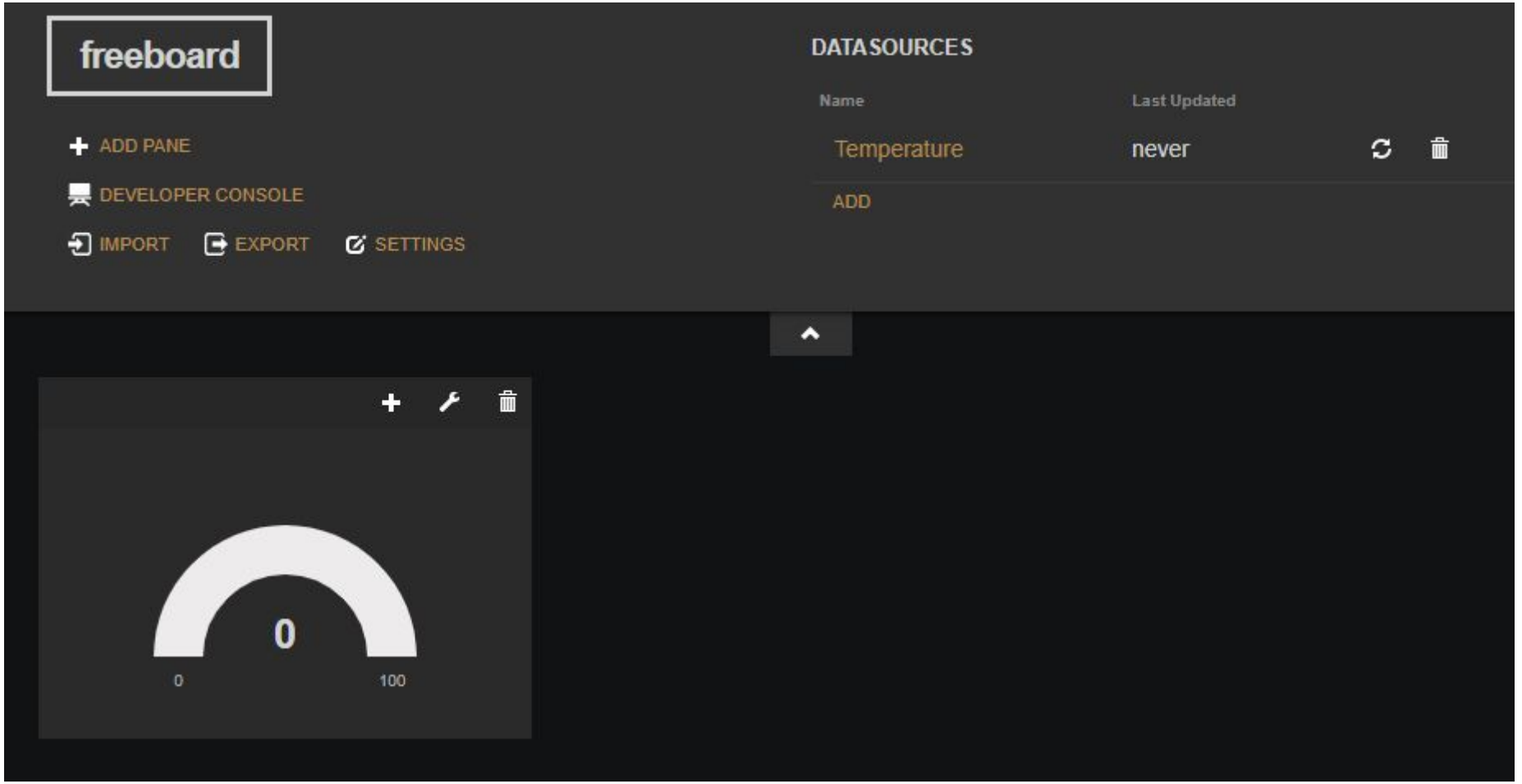
Freeboard interface

1. Go to www.freeboard.io

2. Create account / Login to account

3. On the www.dweet.io website, click the Create a custom dashboard button

Example


freeboard
ADD PANE
DEVELOPER CONSOLE
IMPORT
EXPORT
SETTINGS
DATASOURCES
Name
Last Updated
Temperature
never
ADD
0
0
100

Changing the interface