How Arduino YUN can send and get dweets using dweet.io service.

Introduction.

It is now normal to hear about the word IoT.

What does word mean?

The Acronym word **"IoT"** can be expanded as "Internet of Things".

Similar as when anybody post/get a Tweet using Twitter App, or when anybody follows somebody in Twitter, when we talk about the IoT, we could say that the "tweet" is sent by a machine, and the content of this tweet can be any kind of parameters, values, messages, or any other real about a process that can be shared, to be remotely controlled. The process values could be only read remotely or even modified. This open us many possibilities to interact between remote devices by using dweet.io

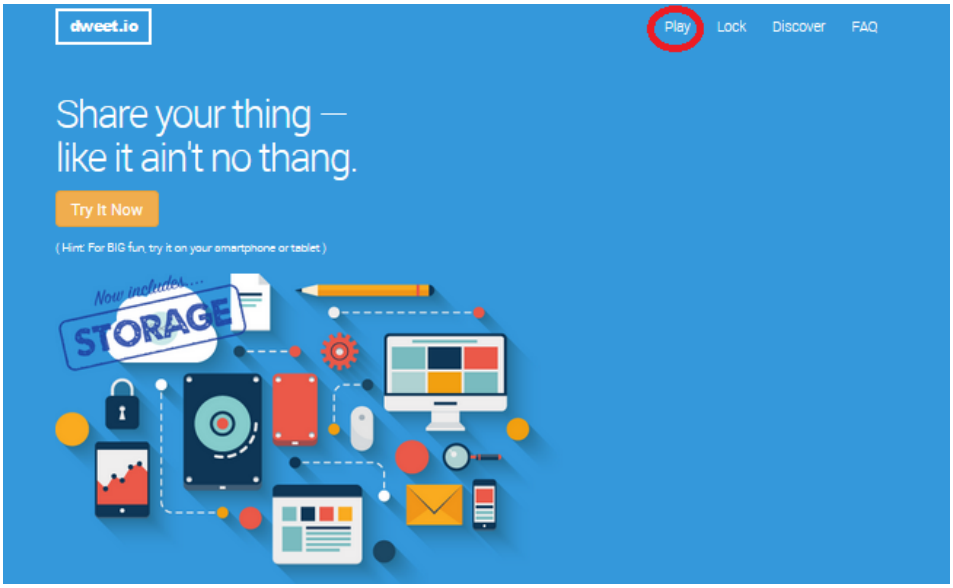
With this short example we will see two methods of how to create a "thing" using the service dweet.io:

1. **Create a "thing" using the service dweet.io, directly on their on webpage dweet.io web. The life of the "thing" will be during the computer is on and the web page is open.**
2. **Create a "thing" inside the code of an Arduino YUN. The life of the "thing" will be during the YUN is powered on and it meanwhile the YUN has WIFI to an access point.**

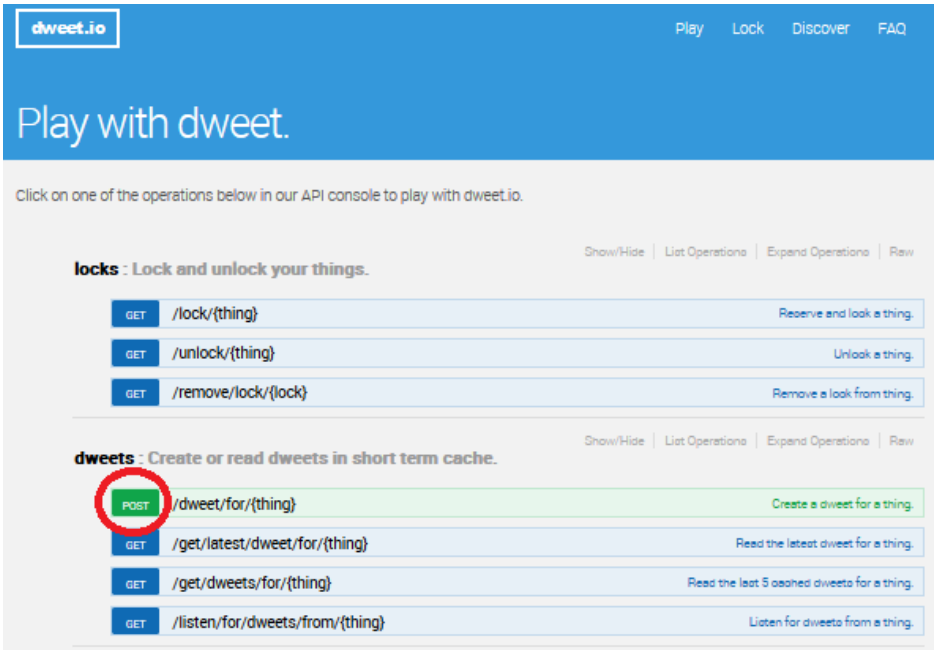
Creating the "thing" at the dweet.io web page for playing.

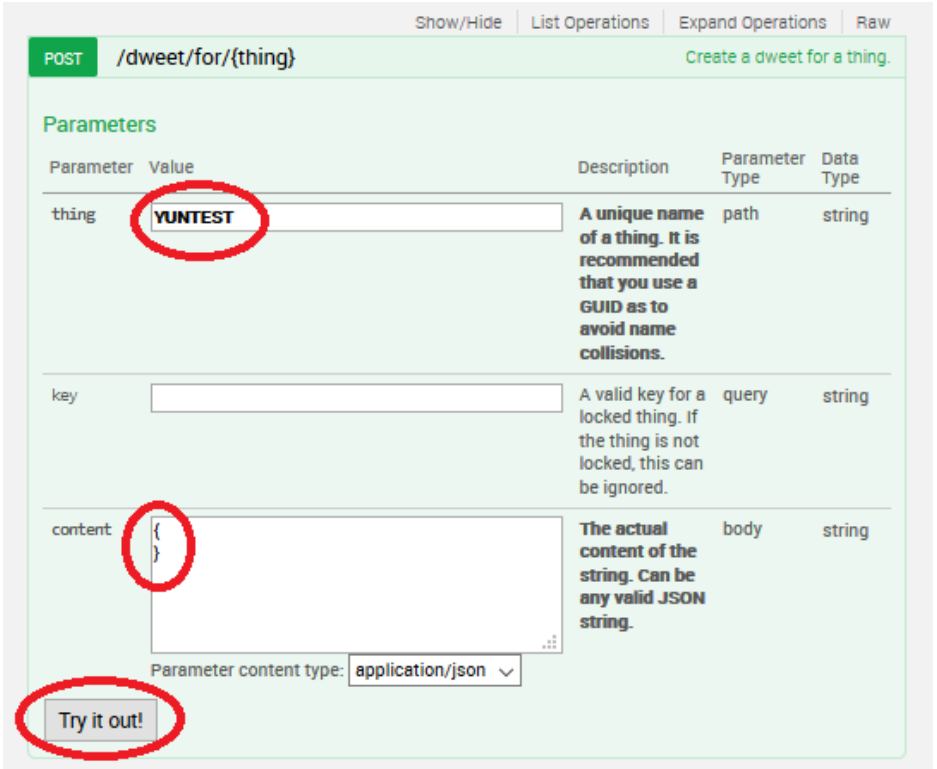
Steps to create a "thing" at dweet.io:

1. Open https://dweet.io/ and type Play on the upper right list.



2. Press **POST** and create a **"thing"** named **YUNTEST**, write the **{ }** at field **content** and press **Try-out!**





The new "thing" YUNTEST is now ready to be read.

Creating a “thing” at the dweet.io just directly inside the Arduino YUN code.

This is the code in an Arduino YUN to create a “thing” called **YUN_ANALOG_IN_DWEETING** in dweet.io using the instruction client.get to monitorize two analog inputs.

See complete code for the YUN

```
#include <Bridge.h>
#include <HttpClient.h>
int analogIn = A0; int analogVal = 0; int analogIn1 = A1; int analogVal1 = 0;
void setup() {
  // Bridge takes about two seconds to start up
  // it can be helpful to use the on-board LED
  // as an indicator for when it has initialized
  pinMode(13, OUTPUT);
  digitalWrite(13, LOW);
  Bridge.begin();
  digitalWrite(13, HIGH);
}

void loop() {
// Initialize the client library
  analogVal = analogRead(analogIn);analogVal1 = analogRead(analogIn1);
  HttpClient client;
// Make a HTTP request:To send analog input values of A0 and A1
  client.get("http://www.dweet.io/dweet/for/YUN_ANALOG_IN_DWEETING?AnalogInput_A0="+String(analogVal)
+"&AnalogInput_A1="+String(analogVal1));
// from the server, read response and print at the console:
  int i=0; // for degugging
  delay(1000);
  while (client.available()) {
    char c = client.read();
  }
  delay(1000);
}
```

This is the meaning of the call to the dweet.io url:

```
client.get("http://www.dweet.io/dweet/for/YUN_ANALOG_IN_DWEETING?AnalogInput_A0="+String(analogVal)+"&AnalogInput_A1="+String(analogVal1));
```

The YUN as an httpClient must send an string composed of the following parts:

http://www.dweet.io/dweet/for/ → url that must be called

YUN_ANALOG_IN_DWEETING → Name of the "thing"

?AnalogInput_A0=" → Label for the next variable value. In this case the label is "Analoginput_A0"

+String(analogVal) → Variable value to associate to the previous label. In this example it corresponds to the variable analogVal converted to an String.

+"&AnalogInput_A1=" → Label for the next variable value. In this case the label is "Analoginput_A1". **IMPORTANT IS THE CHARACTER** & this is needed when we want to add more than one variable to the same "thing", in our case theis character is used only once, but it can be added as many times we need if we want to add 5 variable to the same "thing"

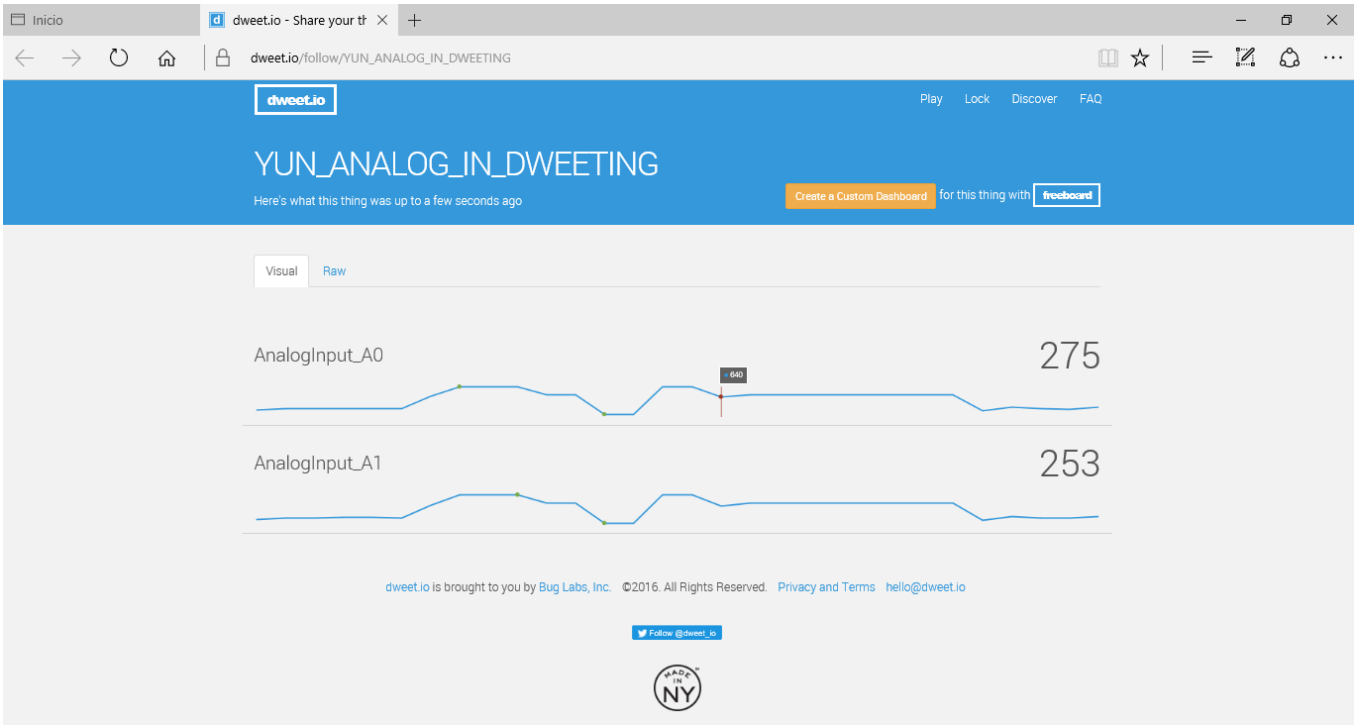
+String(analogVal1) → Variable value to associate to the previous label. In this example it corresponds to the variable analogVal1 converted to an String.

Client.get(" string "); → This is the instruction that needs to send one string to the http service in our case to the service dweet.io

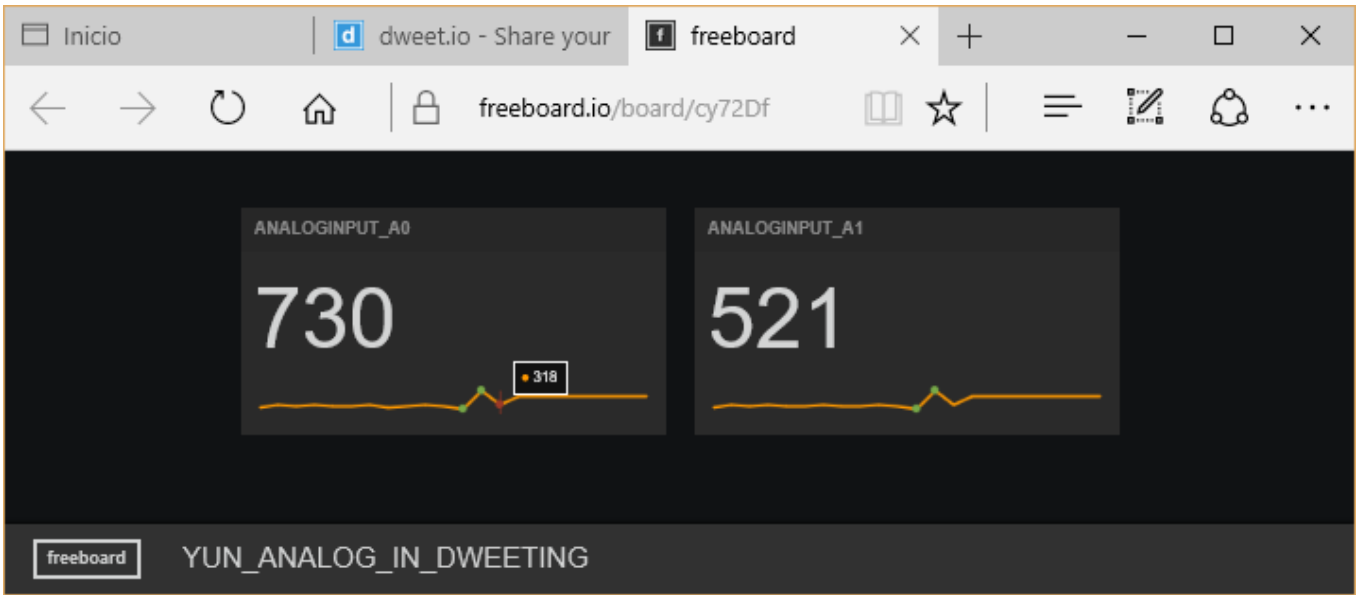
Reading the dweet sent by the YUN in a remote computer

(Arduino YUN must be connected to a WIFI access point).

https://dweet.io/follow/YUN_ANALOG_IN_DWEETING



Select "Create a Custom Dashboard" to obtain a simple panel with the parameters of the "thing" automatically.



https://freeboard.io/board/cy72Df

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Issued: March 2016