



# SESIÓN VIII





# TEMAS DE AVANCE

- Udibots.
- Monitoreando la temperatura y humedad.
- Encendiendo un led.

MAKERS  
INFORMATICA

# UBIDOTS

Es un servicio en la nube que te permite almacenar datos de sensores y visualizarlos en tiempo real a través de una página web.

Su pagina principal es :

<https://ubidots.com/>

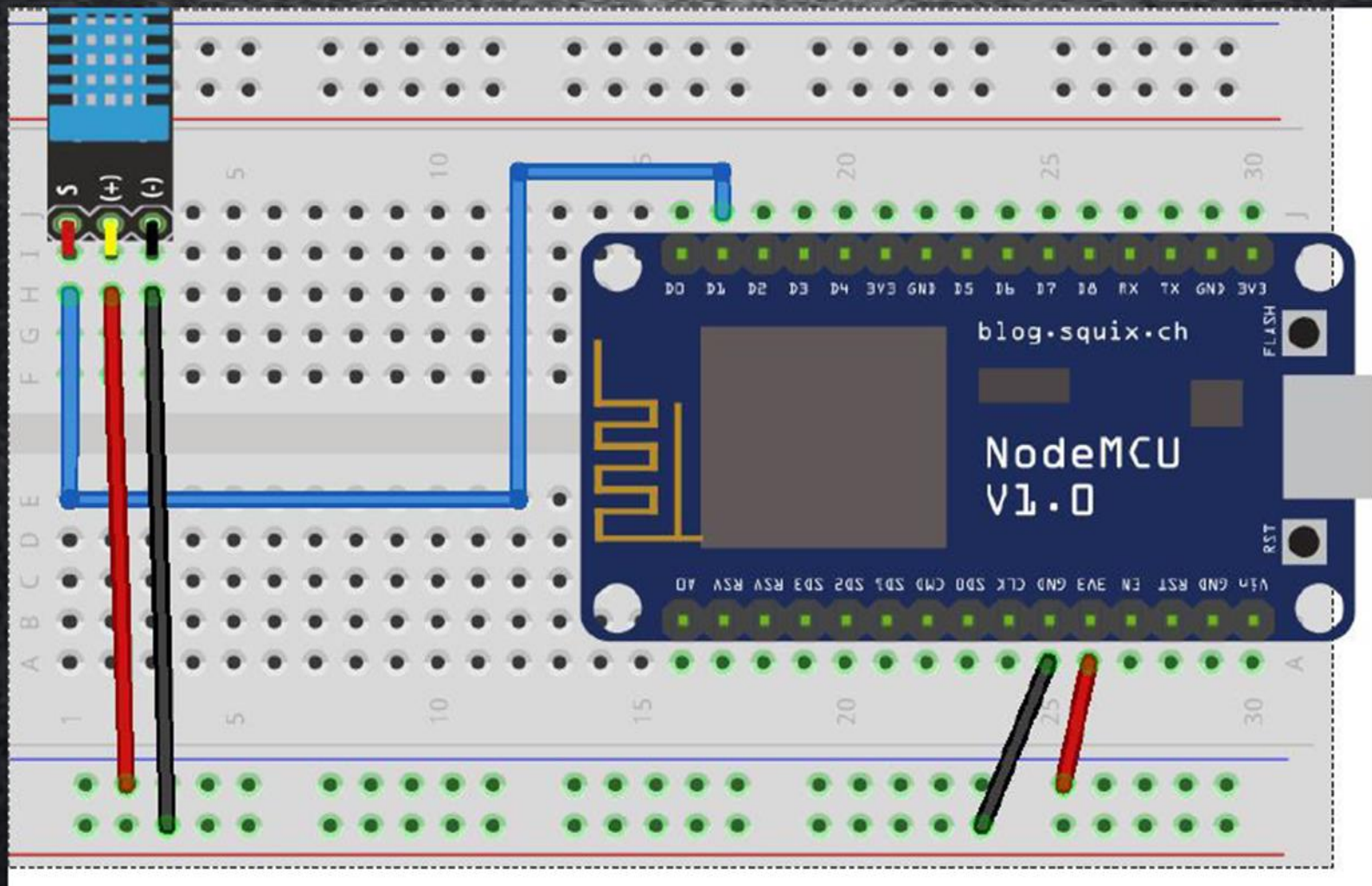




# MONITOREANDO LA TEMPERATURA Y HUMEDAD



# ESQUEMA





# EJERCICIO I - UBIDOTS

The screenshot shows a Google search interface. The search bar contains the text 'ubidots'. Below the search bar, the results are displayed. The first result is highlighted with a red box and contains the following text:

**Ubidots: IoT platform | Internet of Things**  
<https://ubidots.com/> ▼ Traducir esta página

Below the main result, there are several links to different sections of the Ubidots website:

- Ubidots for Education**  
Ubidots for Education Cloud  
Architecture and Development ...
- Ubidots**  
Ubidots. Sign In. Forgot password?  
Sign In. New to Ubidots ...
- Platform**  
Ubidots IoT Development Platform  
merges the physical world with ...
- Signup**  
When our customers ask "How did  
you manage to build an API in a ...
- Pricing**  
Flexible pricing to take your Ubidots  
powered IoT ...
- About**  
Connected experience at your  
service. Get to know Ubidots ...

At the bottom of the results, there is a link: [Más resultados de ubidots.com »](#)

Ubidots

# EJERCICIO I - UBIDOTS



Página principal - Ubidots



# EJERCICIO I - UBIDOTS

← → × [https://industrial.ubidots.com/accounts/signup\\_industrial/](https://industrial.ubidots.com/accounts/signup_industrial/)



**ubidots**

Ubidots Low-code IoT Application Development Platform

A toolkit for assembling and launching Mobile and Web IoT Apps

LOGIN

Username

Email

App name .iot.ubidots.com

Password

**CREATE MY APP**

By signing up you agree to our [Terms of Service](#) and [Privacy Policy](#)

 partner network

 **sigfox**

 **Particle**

 **THE THINGS NETWORK**

 **ESPRESSIF**

 **EMBEDDED CLOUD MICROCHIP DESIGN PARTNER**

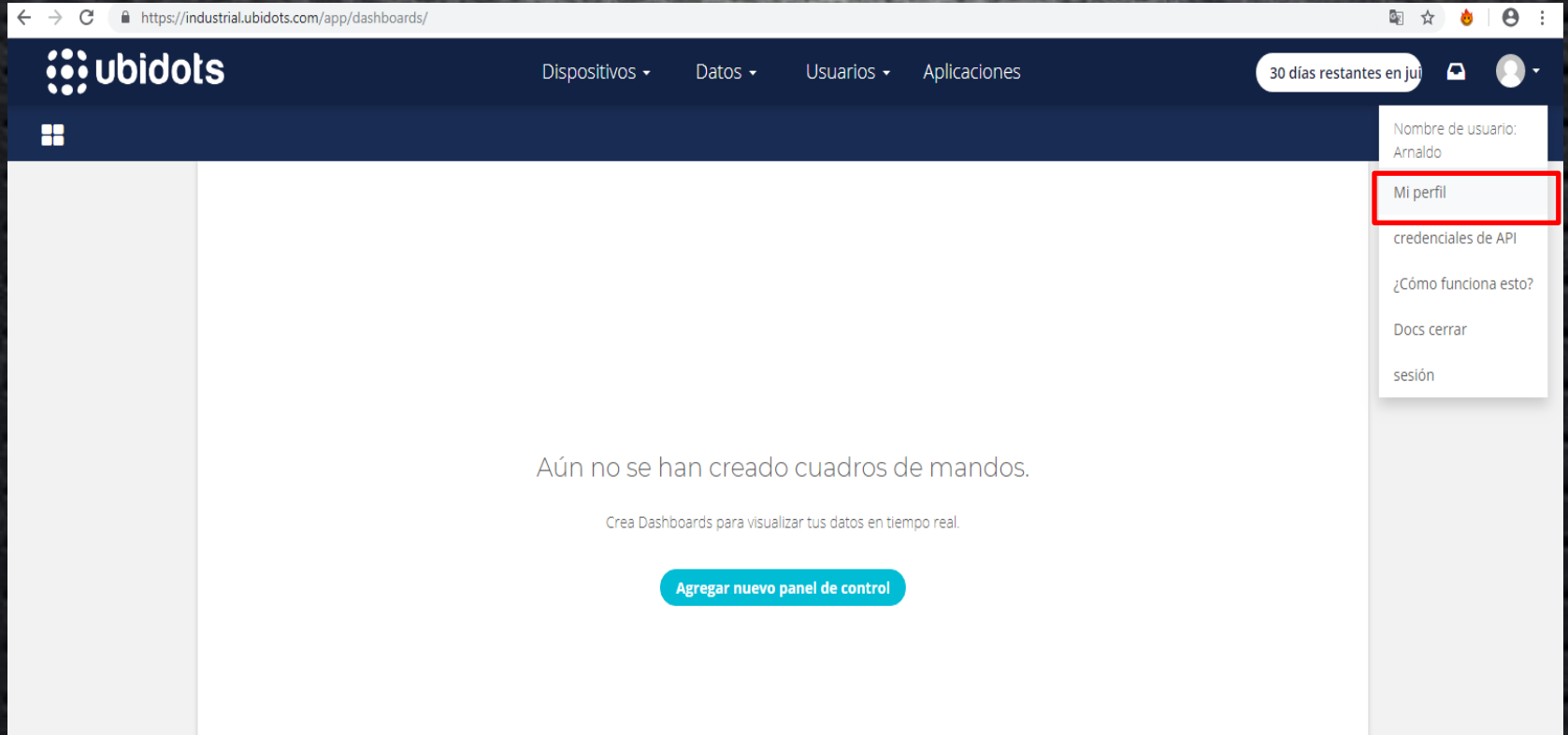
 **csia**  
cloud system integration association

**45,000 IoT Entrepreneurs are already connecting the dots with Ubidots**

## Registro - Ubidots

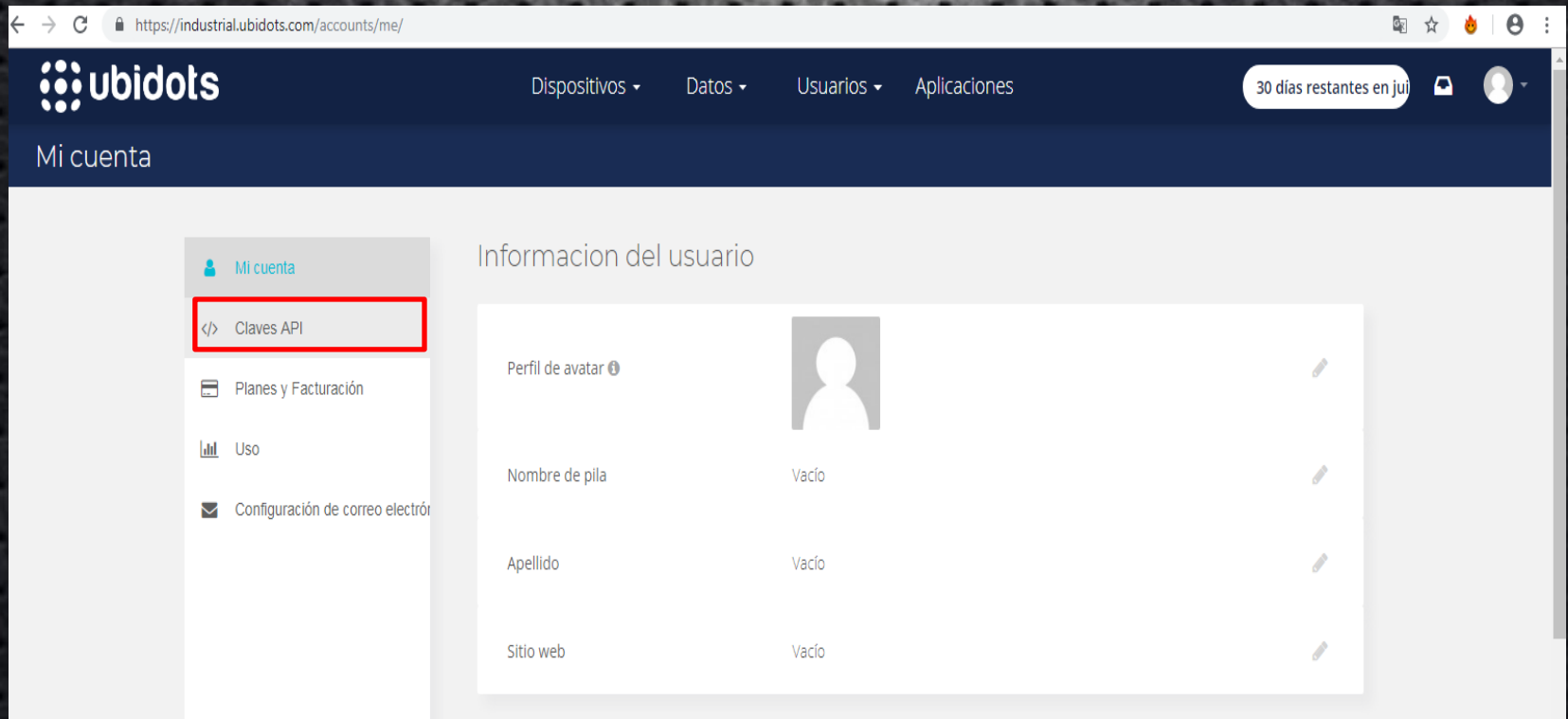


# EJERCICIO I - UBIDOTS



## Mi perfil- Ubidots

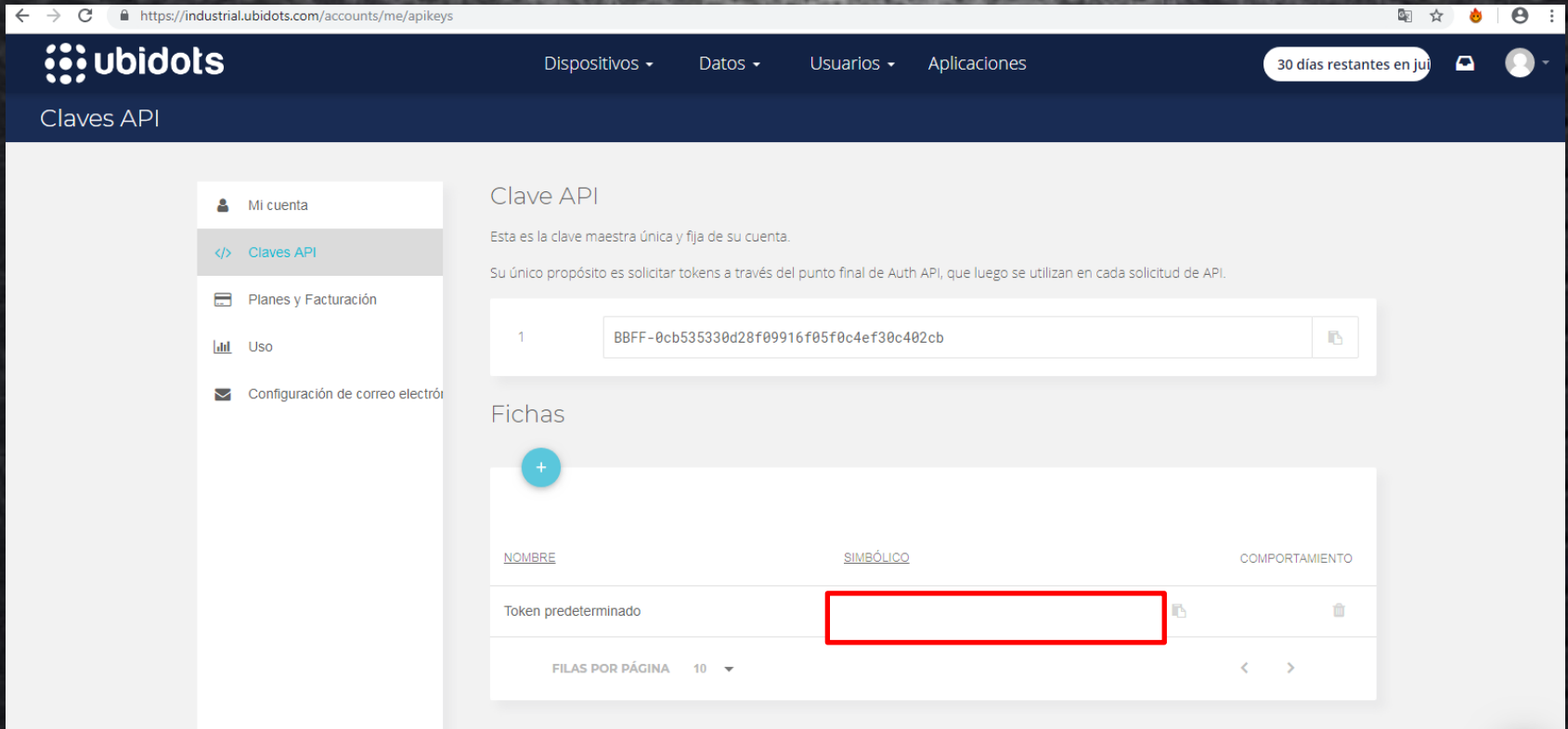
# EJERCICIO I - UBIDOTS



## Claves API- Ubidots



# EJERCICIO I - UBIDOTS



The screenshot shows the Ubidots web interface. The top navigation bar includes the Ubidots logo, a user profile icon, and a notification for 30 days remaining. The main header has links for Dispositivos, Datos, Usuarios, and Aplicaciones. The left sidebar contains links for Mi cuenta, Claves API (selected), Planes y Facturación, Uso, and Configuración de correo electrónico.

The main content area is titled 'Claves API'. It explains that the master key is unique and fixed, and its purpose is to request tokens via the Auth API endpoint. Below this, a text box displays the master key: `BBFF-0cb535330d28f09916f05f0c4ef30c402cb`.

Below the master key, there is a section titled 'Fichas' (Tokens) with a '+ ' button to add new tokens. A table lists the tokens:

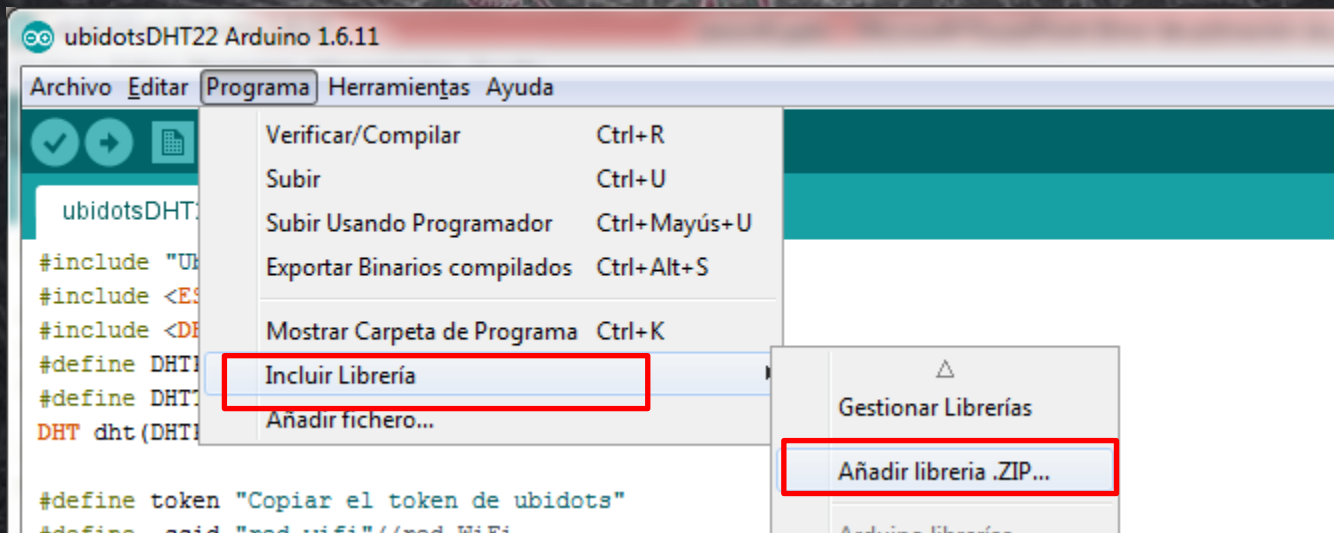
NOMBRE	SIMBÓLICO	COMPORTAMIENTO
Token predeterminado		

The 'SIMBÓLICO' column for the 'Token predeterminado' row is highlighted with a red rectangle. At the bottom of the table, there is a pagination control showing 'FILAS POR PÁGINA 10' and navigation arrows.

Token predeterminado - Ubidots

# EJERCICIO I - UBIDOTS

Abrir el sketch.ino (ubidotsDHT22) e incluir la librería.zip de ubidots.



Reiniciar el IDE Arduino.



# EJERCICIO I - UBIDOTS

Copiar el **token predeterminado** de **ubidots** a la variable `token` del **sketch.ino**. **Conectarse a una red WiFi (SSID Y PASS).**

```
#include "UbidotsMicroESP8266.h";
#include <ESP8266WiFi.h>
#include <DHT.h>
#define DHTPIN D1 //pin donde conectamos el sensor
#define DHTTYPE DHT22 // iniciamos el dht11
DHT dht(DHTPIN, DHTTYPE);

#define token "Copiar el token de ubidots"
#define ssid "red wifi"//red WiFi
#define pass "clave de la red WiFi"//contraseña de la

Ubidots client(token);
```

# EJERCICIO I - UBIDOTS

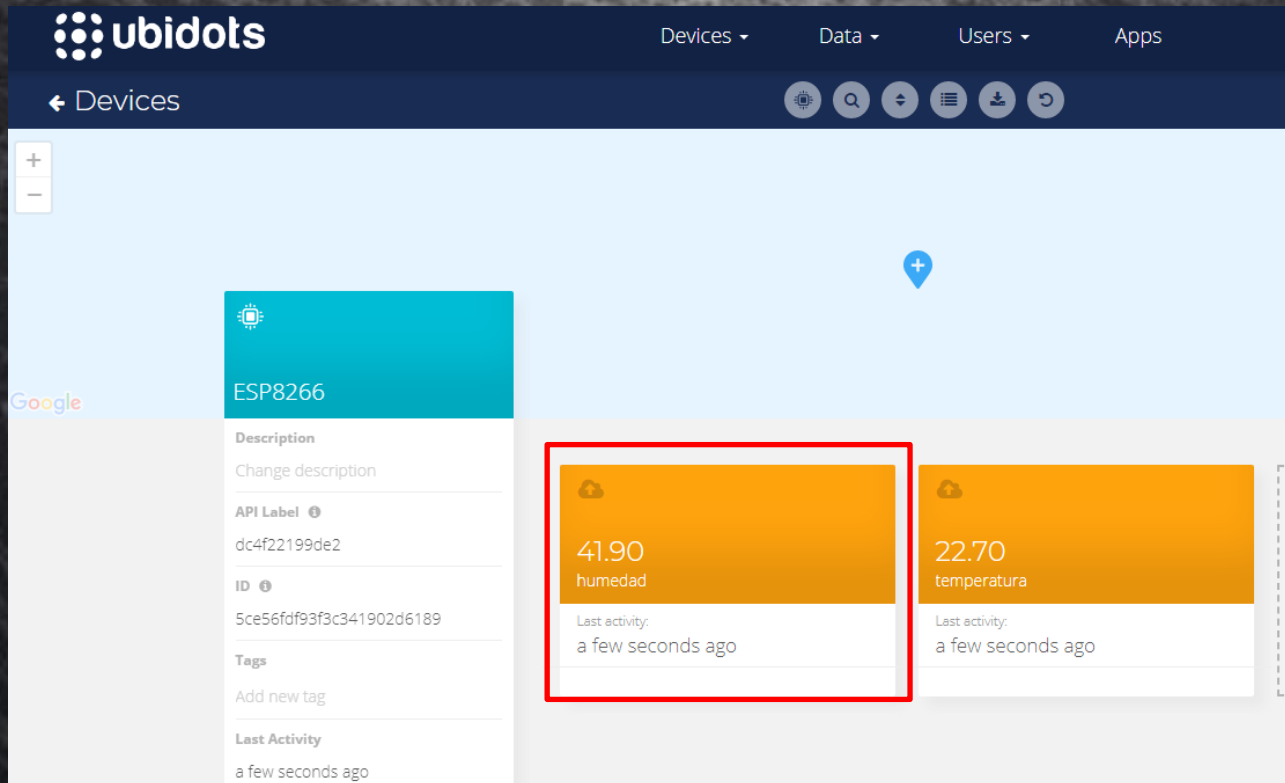
The screenshot shows the Ubidots web application interface. The top navigation bar includes the Ubidots logo, a dropdown menu with 'Dispositivos', 'Datos', 'Usuarios', and 'Aplicaciones', and a notification for '30 días restantes en jui'. The main content area is titled 'Dispositivos' and features a filter bar with 'Filtrar por: Todas las organizaciones', 'Ordenar por nombre', and a search bar labeled 'Search Devices'. Below this is a table of devices. The first device, 'ESP8266', is highlighted with a red box. The table has columns for 'NOMBRE', 'ÚLTIMA ACTIVIDAD', 'CREADO EN', 'ORGANIZACIÓN', and 'COMPORTAMIENTO'. The 'ESP8266' device shows 'Ninguna ultima actividad' and was created on '2019-05-22 11:50:55 -04:...'.

NOMBRE	ÚLTIMA ACTIVIDAD	CREADO EN	ORGANIZACIÓN	COMPORTAMIENTO
ESP8266	Ninguna ultima actividad	2019-05-22 11:50:55 -04:...	---	---

Dispositivos - Ubidots



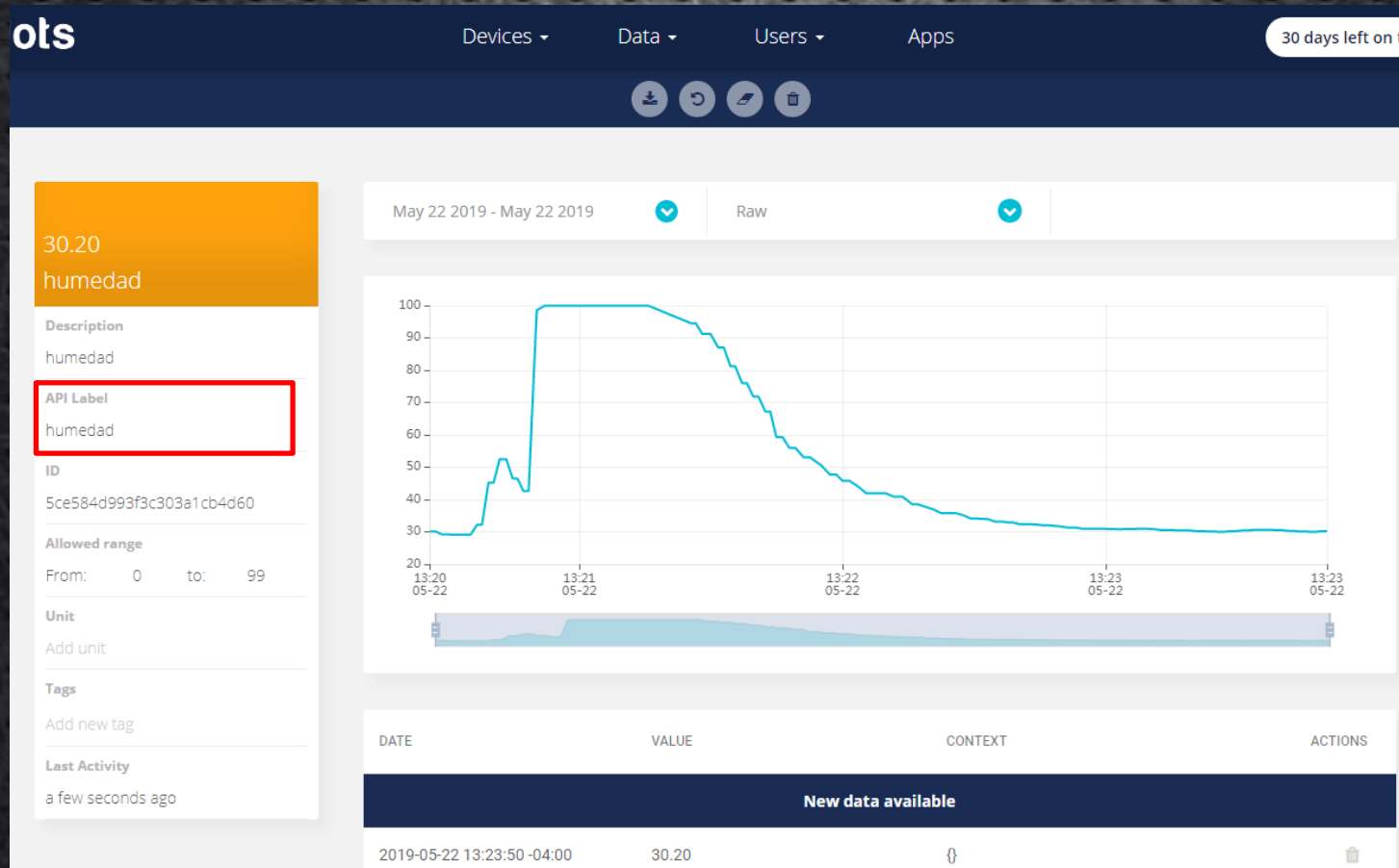
# EJERCICIO I - UBIDOTS



The screenshot displays the Ubidots web interface. At the top, there is a navigation bar with the Ubidots logo and links for Devices, Data, Users, and Apps. Below this, a secondary bar shows a back arrow and the word 'Devices', along with several icons for device management. The main content area is divided into two sections. On the left, a sidebar for the device 'ESP8266' provides details such as its description, API label (dc4f22199de2), ID (5ce56fdf93f3c341902d6189), tags, and last activity (a few seconds ago). On the right, a large map area shows a single data point represented by a blue location pin. Below the map, two data cards are visible. The first card, for 'humedad' (humidity), shows a value of 41.90 and is highlighted with a red rectangular box. The second card, for 'temperatura' (temperature), shows a value of 22.70. Both cards indicate the last activity was 'a few seconds ago'.

Device	Variable	Value	Last Activity
ESP8266	humedad	41.90	a few seconds ago
ESP8266	temperatura	22.70	a few seconds ago

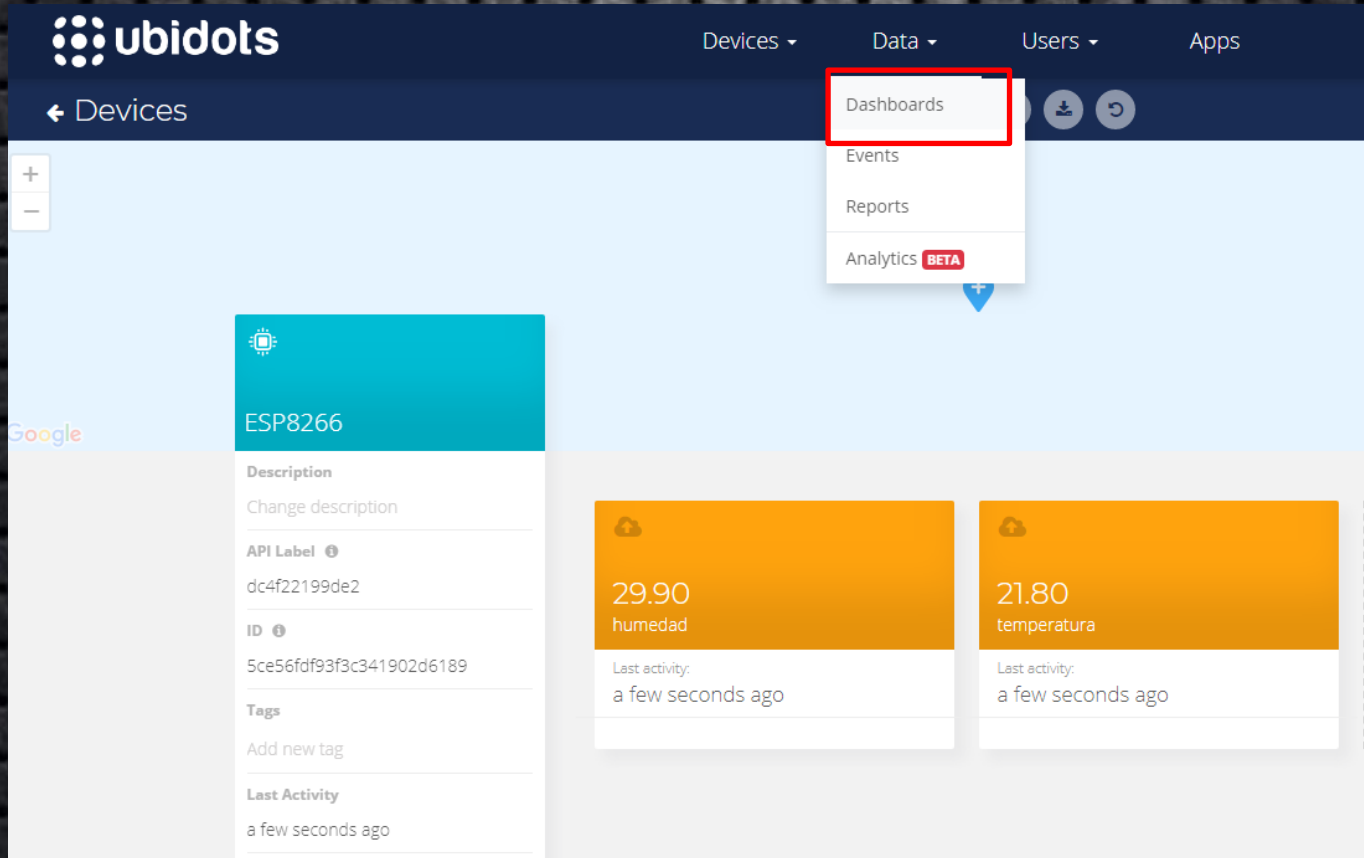
# EJERCICIO I - UBIDOTS



API Label



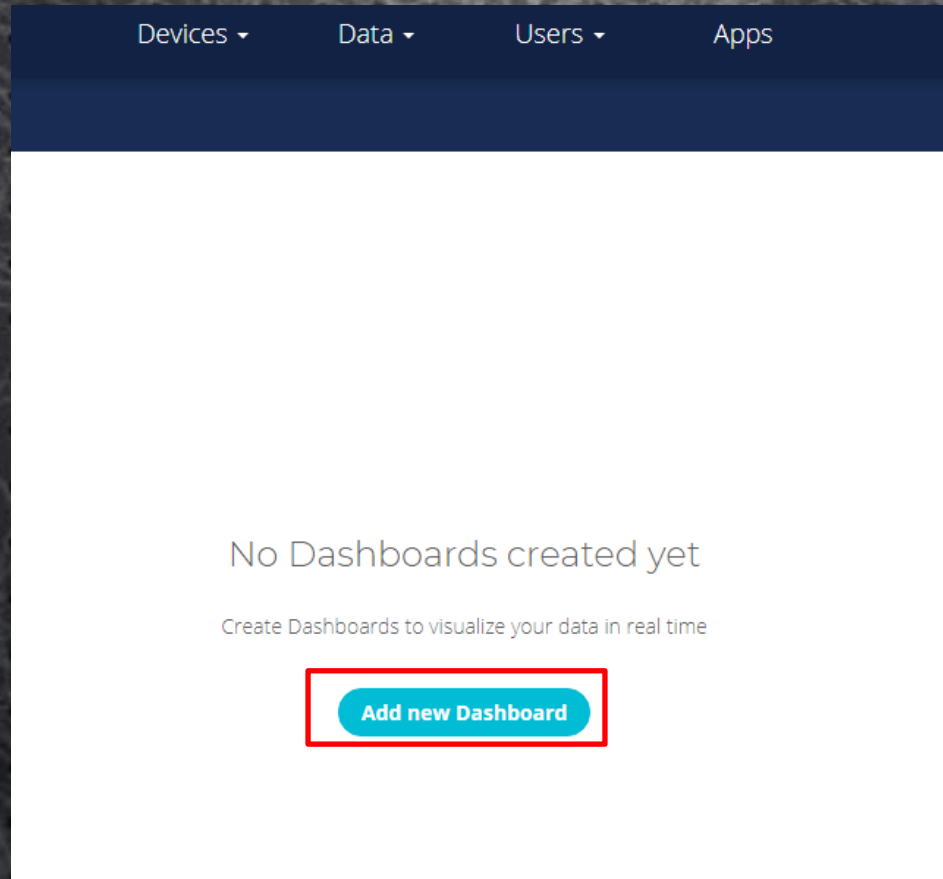
# EJERCICIO I - UBIDOTS



The screenshot displays the Ubidots web application interface. At the top, the navigation bar includes the Ubidots logo and menu items for 'Devices', 'Data', 'Users', and 'Apps'. A dropdown menu is open under the 'Data' menu, with 'Dashboards' highlighted by a red rectangle. Other options in the dropdown include 'Events', 'Reports', and 'Analytics' (marked as BETA). The main content area shows a device page for 'ESP8266' on the left, with fields for Description, API Label, ID, Tags, and Last Activity. On the right, there are two data widgets: 'humedad' (humidity) with a value of 29.90 and 'temperatura' (temperature) with a value of 21.80, both showing 'Last activity: a few seconds ago'.

Data - Dashboards- Ubidots

# EJERCICIO I - UBIDOTS



Add new Dashboards - Ubidots



# EJERCICIO I - UBILOTS

Add new Dashboard ×

General Information

Name New Dashboard

Default time range Last 24 hours ▼

Dynamic Dashboard ☒

Default device Select Device +

Resolution Auto ▼

Date format 05/22/2019 13:25 ▼

Appearance ^

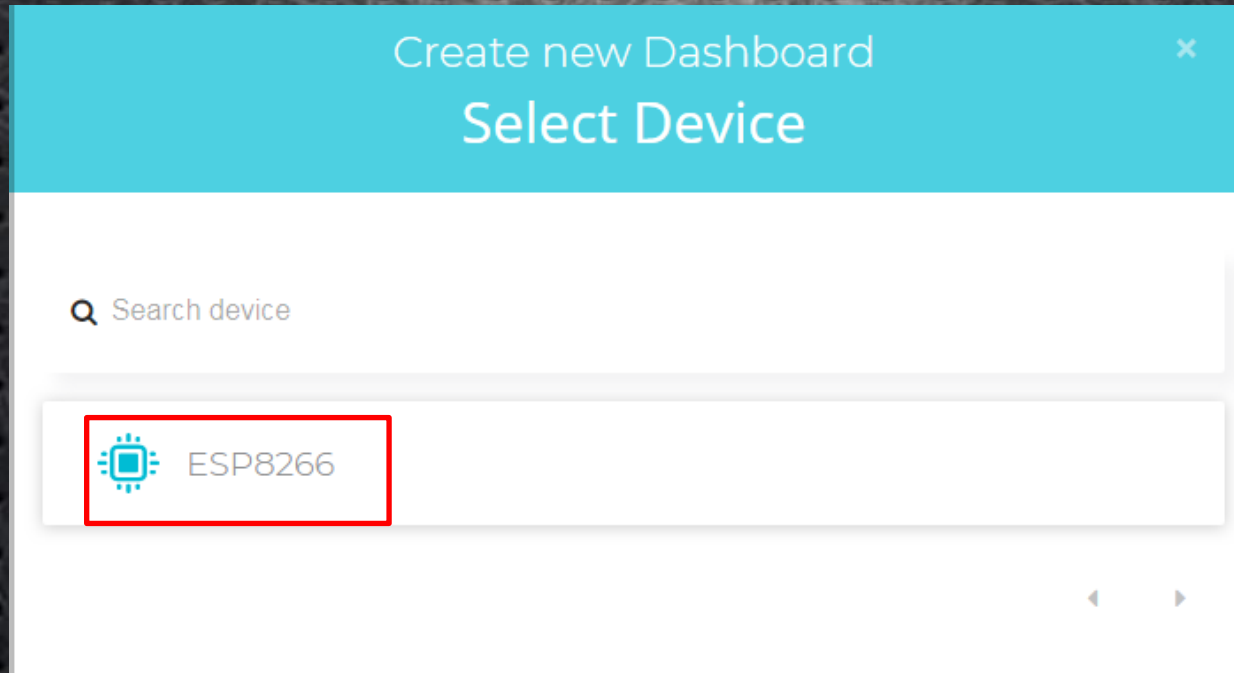
Floating widgets ☐

Widgets opacity 100

✓

Name, Default device - Ubidots

# EJERCICIO I - UBILOTS



ESP8266- Ubidots



# EJERCICIO I - UBIDOTS

Add new Dashboard ×

General Information

Name **DHT22**

Default time range Last 24 hours

Dynamic Dashboard ☒

Default device **ESP8266**

Resolution Auto

Date format 05/22/2019 13:25

Appearance ^

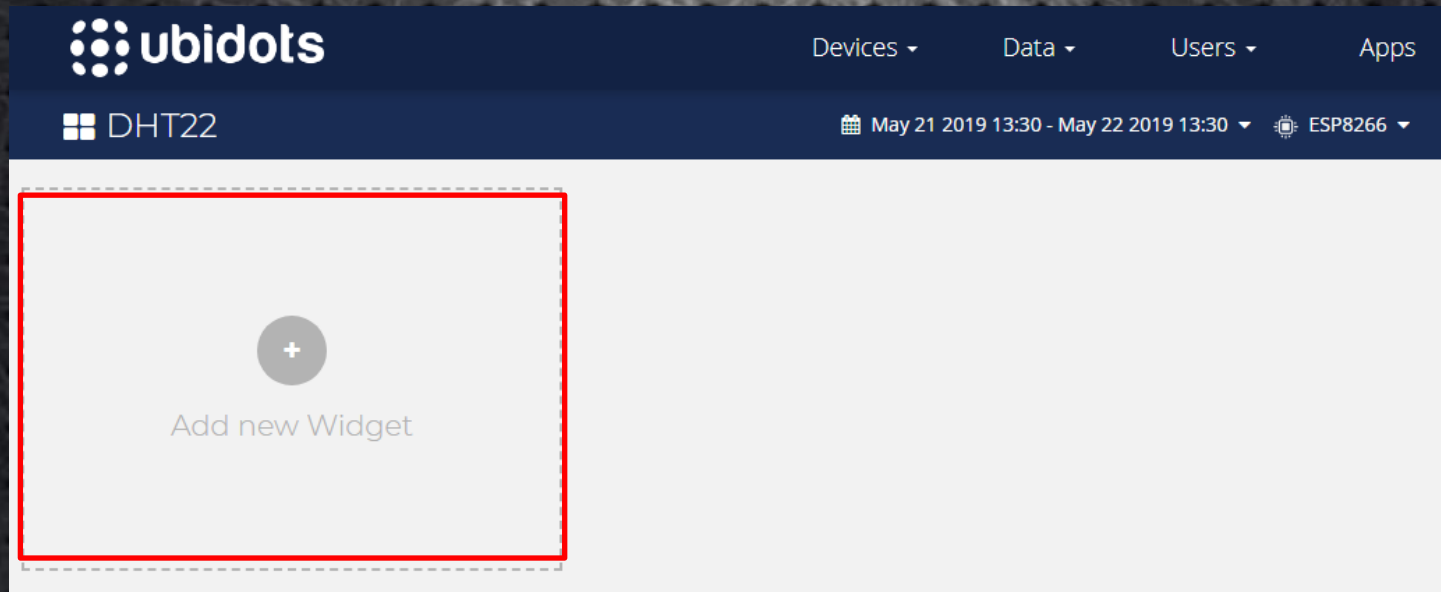
Floating widgets ☐

Widgets opacity 100

☒

Name, Default device - Ubidots

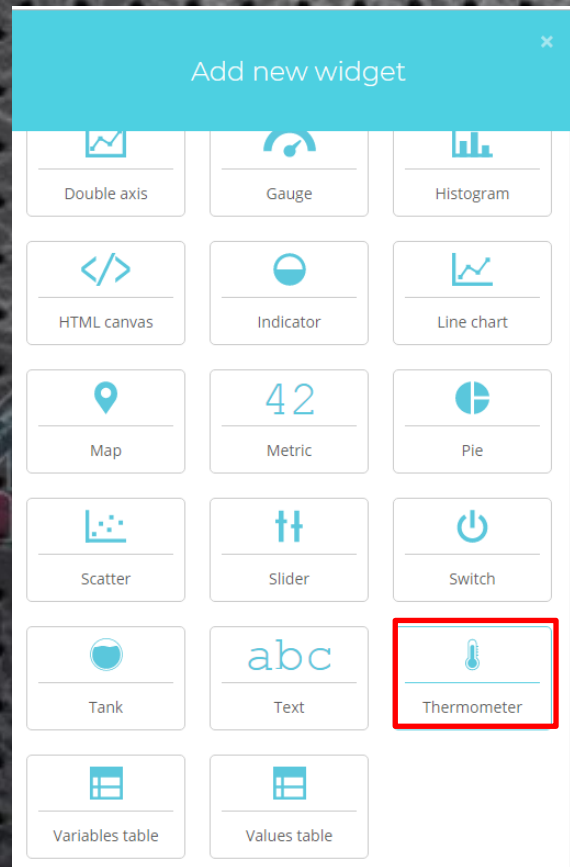
# EJERCICIO I - UBIDOTS



DASHBOARD - Ubidots

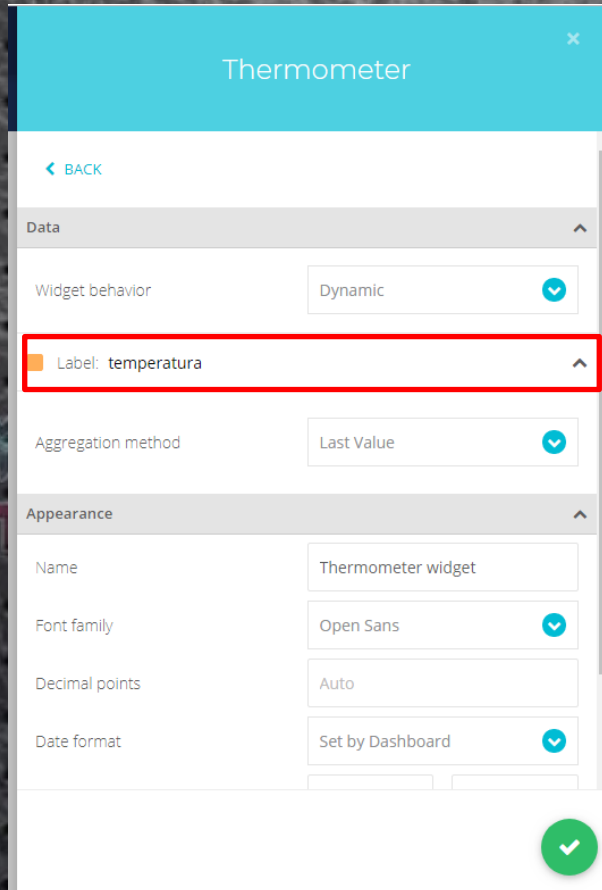


# EJERCICIO I - UBIDOTS



Thermometer - Ubidots

# EJERCICIO I - UBIDOTS



Thermometer

← BACK

Data

Widget behavior: Dynamic

Label: temperatura

Aggregation method: Last Value

Appearance

Name: Thermometer widget

Font family: Open Sans

Decimal points: Auto

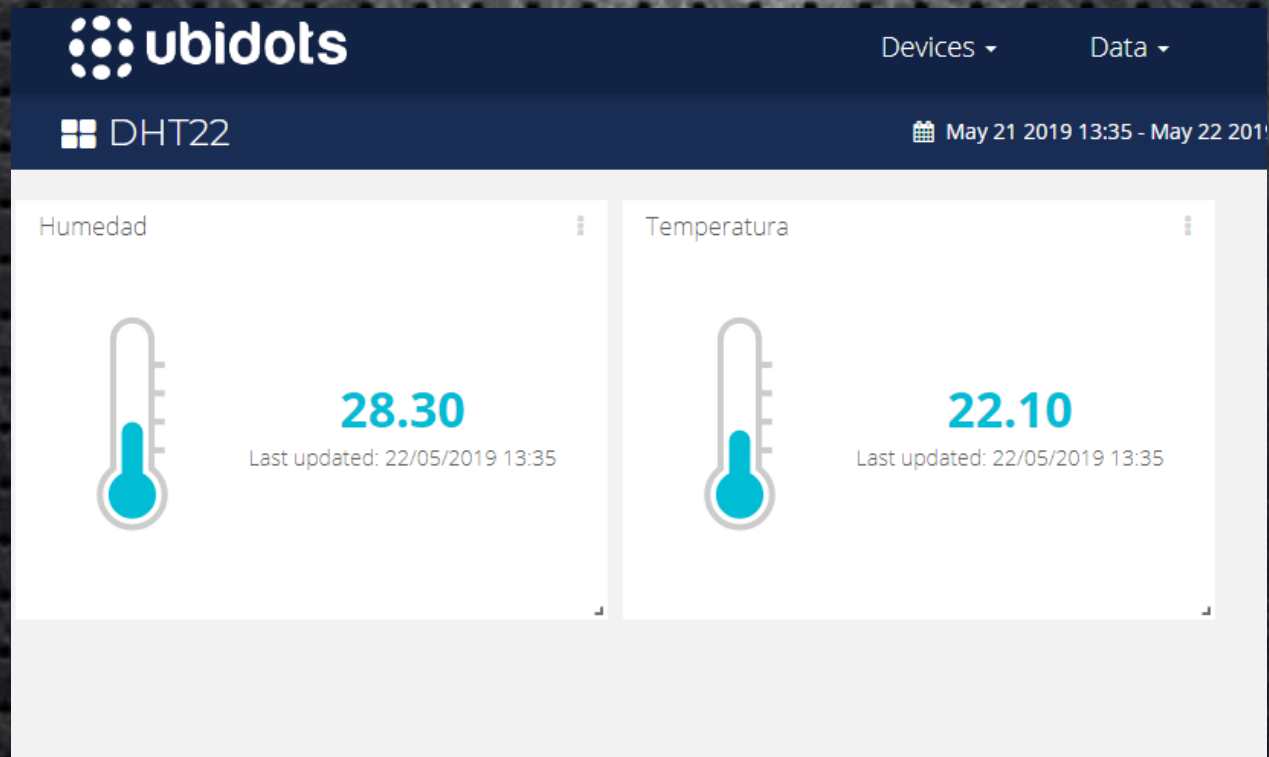
Date format: Set by Dashboard

✓

Label - Ubidots

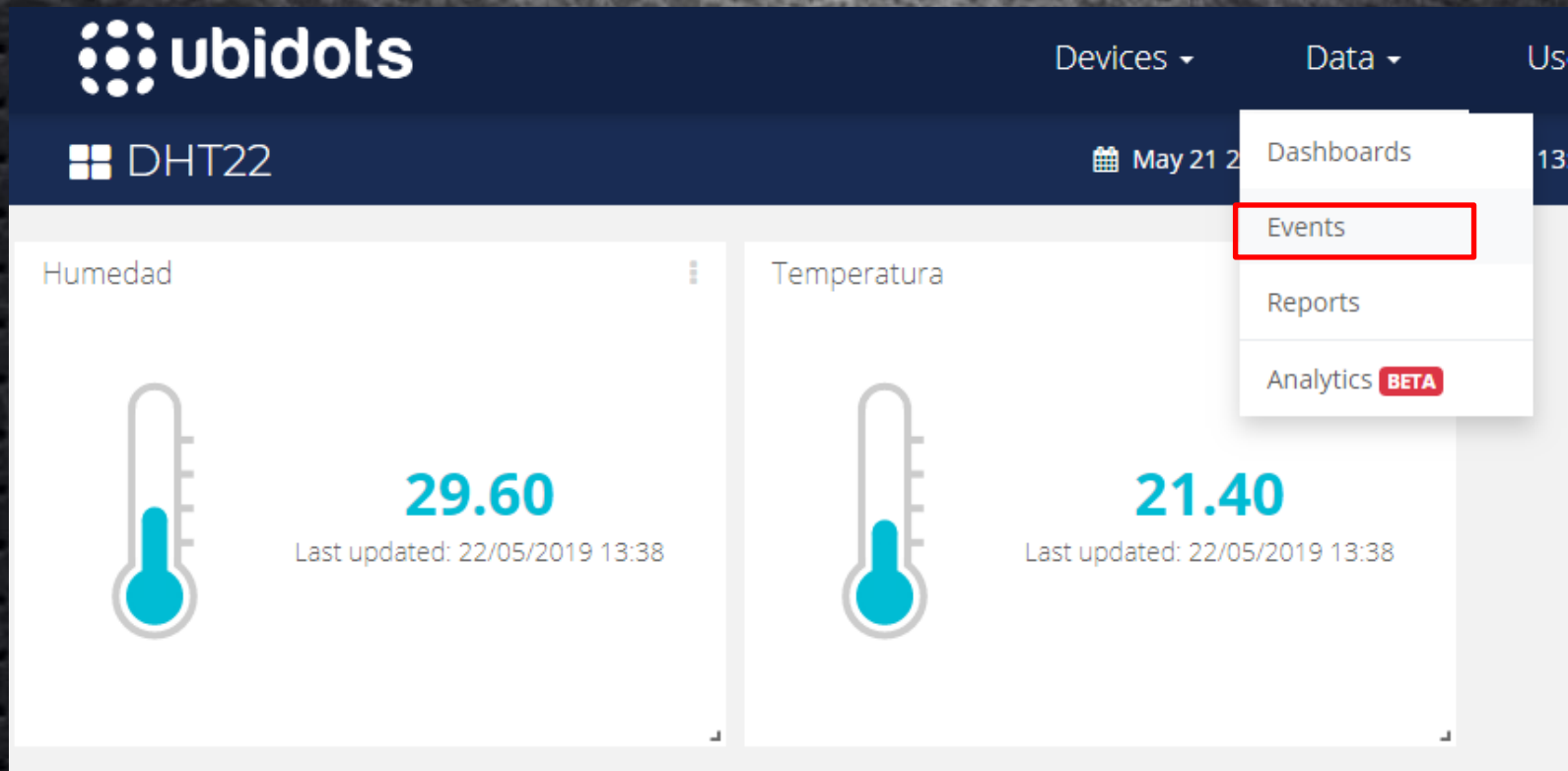


# EJERCICIO I - UBIDOTS



Temperatura y Humedad - Ubidots

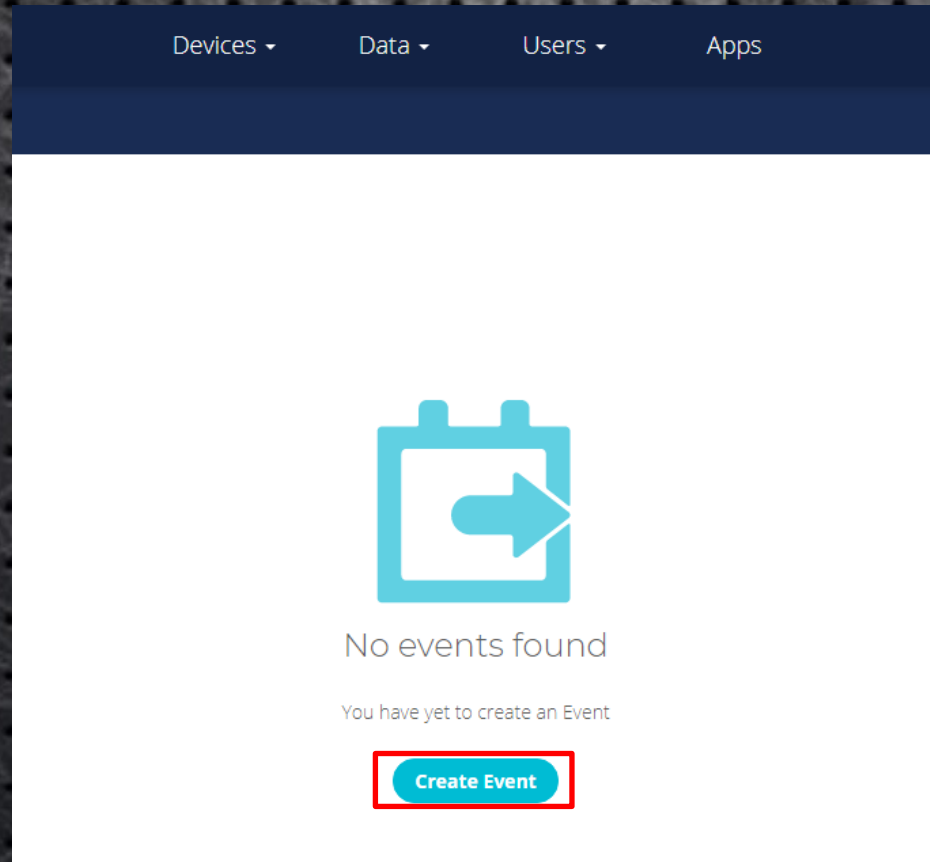
# EJERCICIO I - UBIDOTS



Events - Ubidots



# EJERCICIO I - UBIDOTS



Create Event - Ubidots

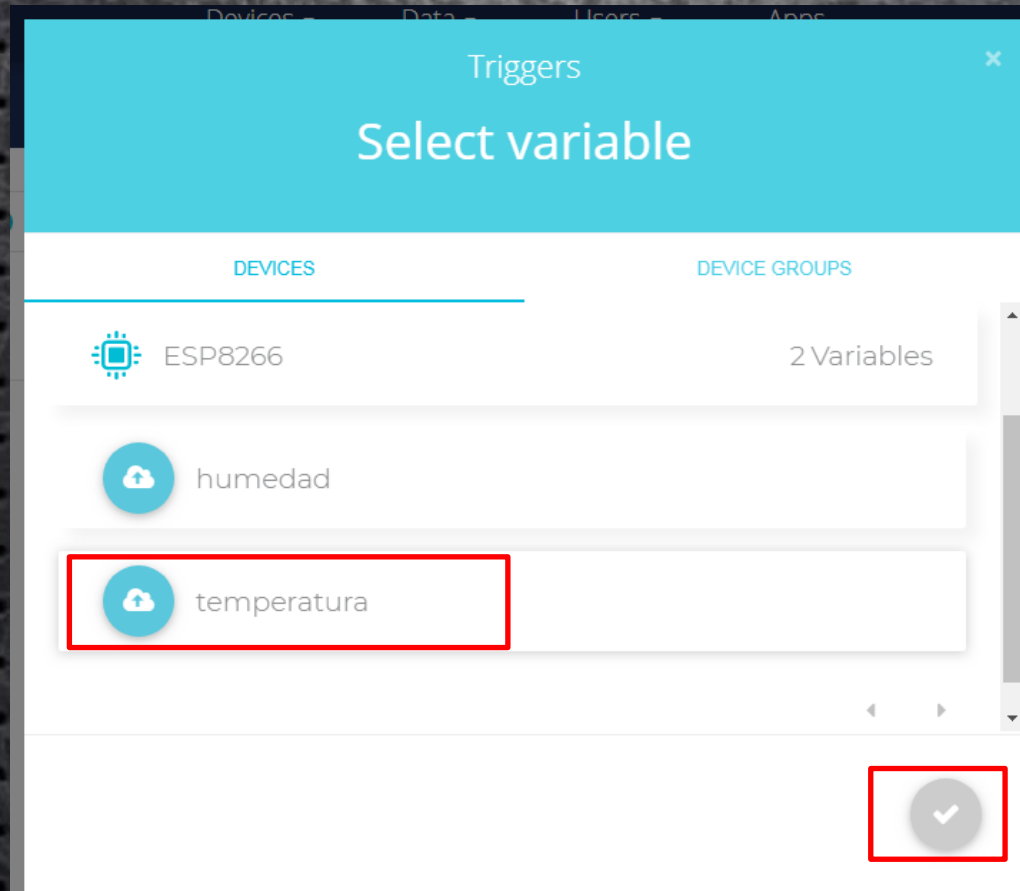
# EJERCICIO I - UBIDOTS

The screenshot shows the 'If triggers' configuration section of the Ubidots dashboard. The interface is divided into two main parts: 'If triggers' (dark blue header) and 'then actions' (light grey header). Under 'If triggers', there is a sequence of configuration steps: 1. A dropdown menu labeled 'Select variable' with a red box around it and a plus icon. 2. A dropdown menu labeled 'Value' with a checkmark icon. 3. The word 'is' as a connector. 4. A dropdown menu labeled 'Equal to' with a checkmark icon and a red box around it. 5. A text input field containing the number '10' with a red box around it. 6. The word 'for' as a connector. 7. A text input field containing the number '0'. 8. The word 'minutes' followed by a trash icon. Below these steps, there are two buttons: '+ And' and '+ Or'. The top navigation bar includes links for 'Devices', 'Data', 'Users', and 'Apps', along with a '30 days left on' notification.

Select variable, equal to- Ubidots



# EJERCICIO I - UBILOTS



Select variable - Ubidots

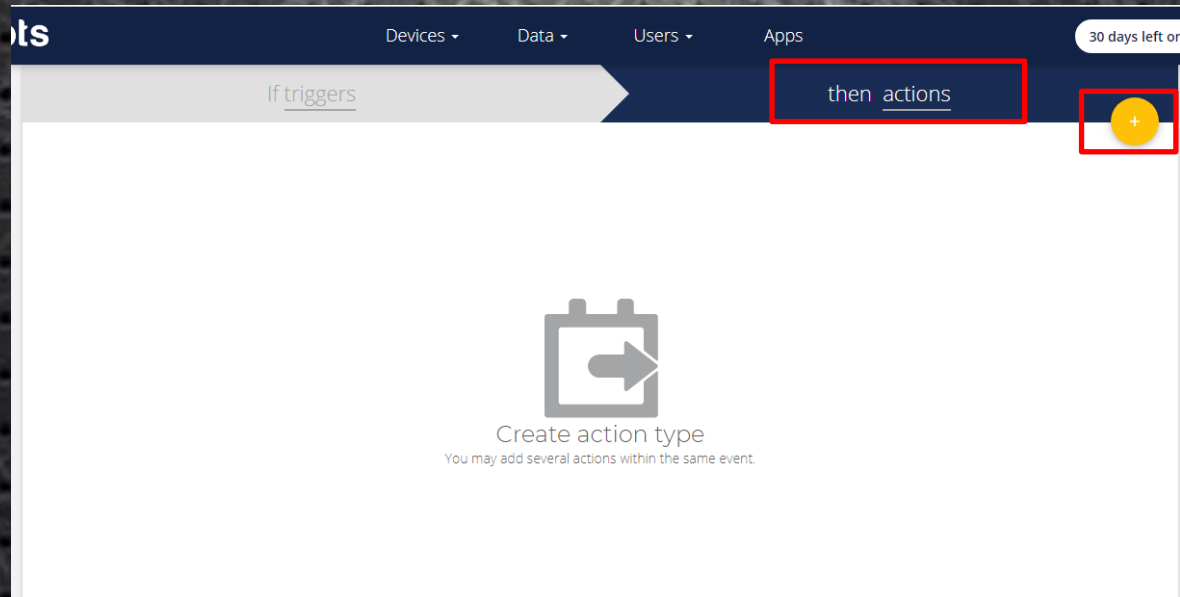
# EJERCICIO I - UBIDOTS

The screenshot displays the 'If triggers' configuration section of the Ubidots interface. It features a rule configuration row with the following elements: a text input field containing 'temperatura', a dropdown menu set to 'Value', a comparison operator dropdown set to 'Greater than', a numeric input field containing '28', a 'for' label, a numeric input field containing '0', and a 'minutes' label. A trash icon is visible at the end of the row. Below this row, there are two buttons labeled '+ And' and '+ Or' for adding additional conditions to the trigger.

Temperatura, value , Greater than, 28 - Ubidots

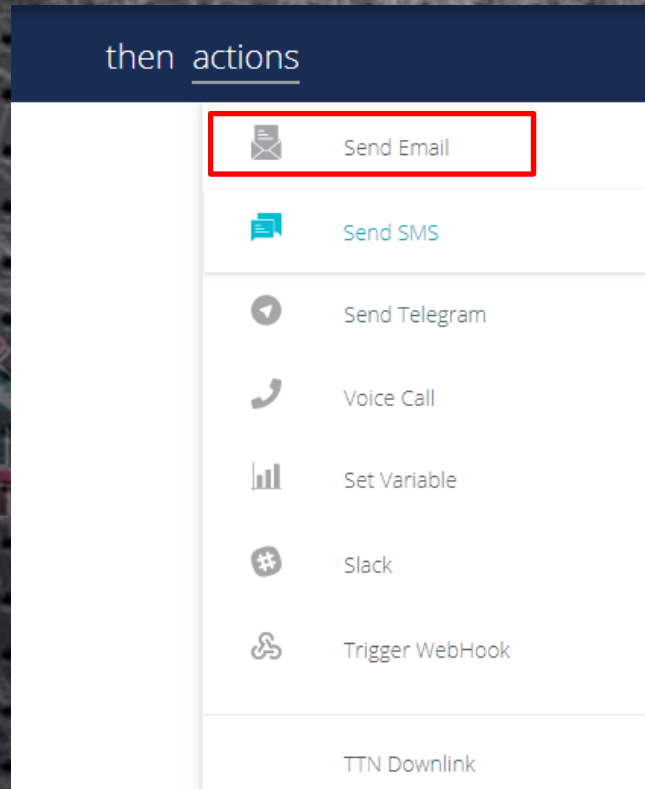


# EJERCICIO I - UBIDOTS



Then actions - Ubidots

# EJERCICIO I - UBIDOTS



Send Email - Ubidots



# EJERCICIO I - UBIDOTS

S Devices ▾ Data ▾ Users ▾ Apps 30 days left on

If triggers then actions

ACTIVE TRIGGER BACK TO NORMAL

Email Address

munozarni12@gmail.com

Add comma separated emails

Subject

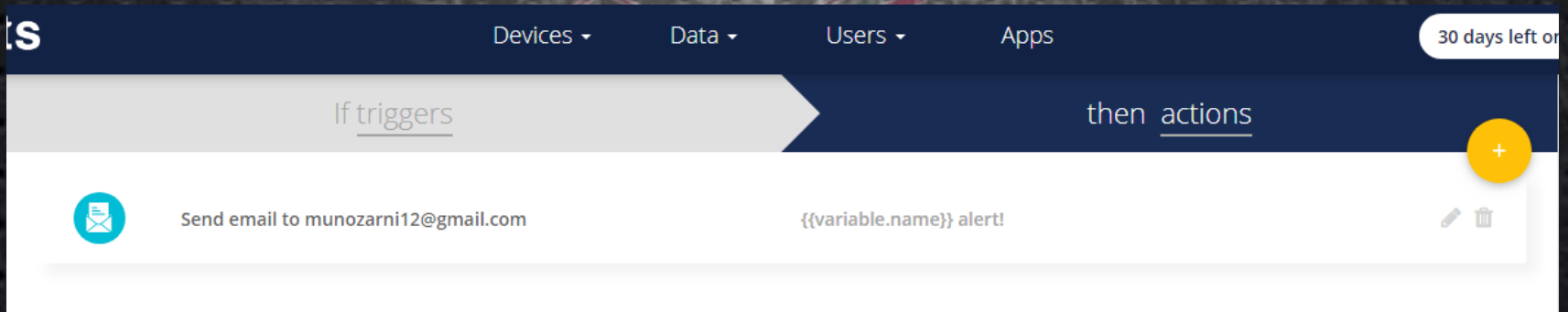
Variable name alert!

Message

Hey there, Variable name was Last value at Trigger timestamp

Registro - Ubidots

# EJERCICIO I - UBIDOTS



Ubidots




# EJERCICIO I - UBIDOTS

ts

Devices ▾Data ▾Users ▾Apps

30 days left o



Almost ready!

Event Name



If temperatura then Email

Trigger this event only during these time periods:

MonTueWedThuFriSatSun

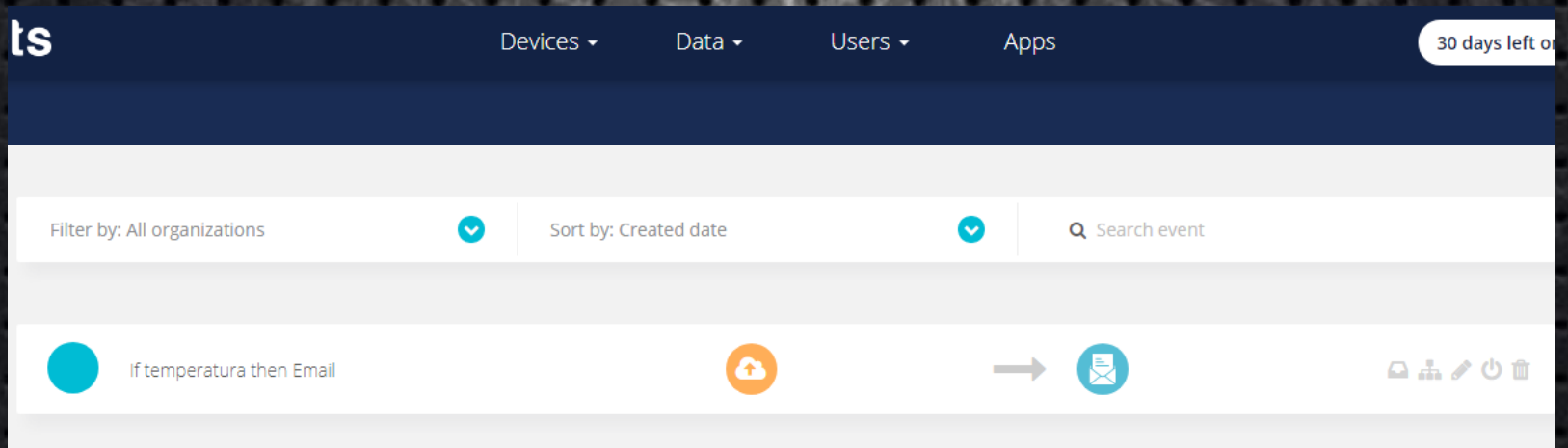
From:0000To:2359

According to your account's time zone



Ubidots

# EJERCICIO I - UBIDOTS



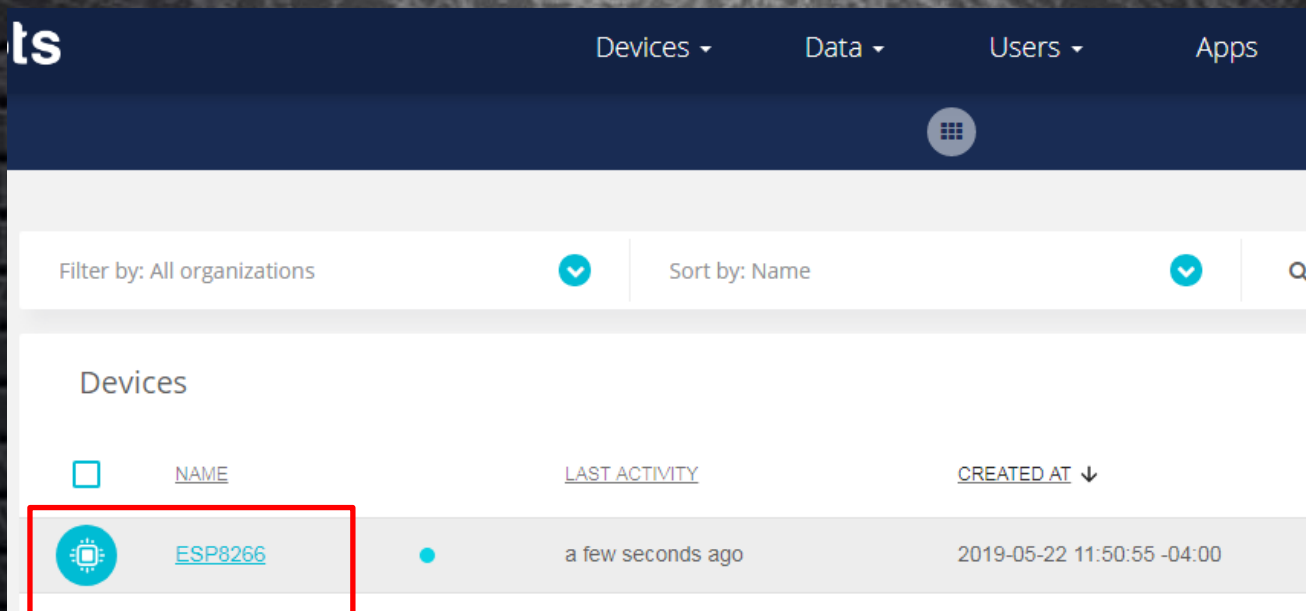
Registro - Ubidots



# ENCENDIENDO UN LED



# EJERCICIO II - UBIDOTS



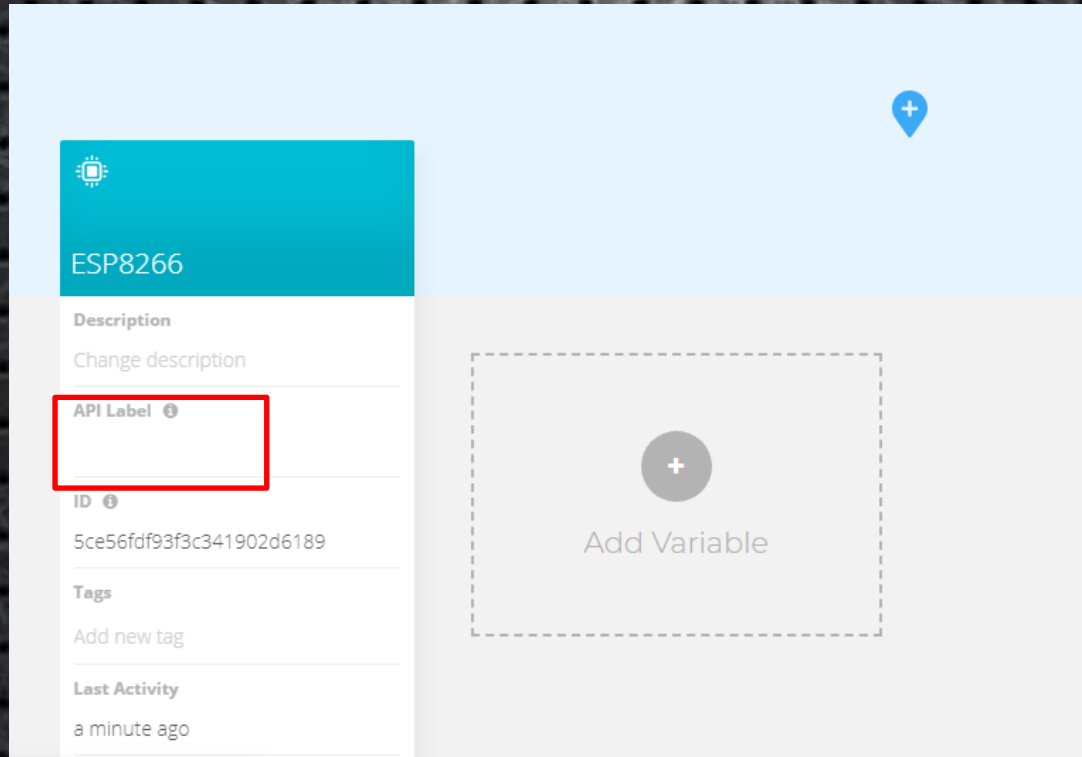
The screenshot shows the Ubidots web interface. At the top, there is a dark blue navigation bar with the Ubidots logo and menu items: Devices, Data, Users, and Apps. Below the navigation bar is a light gray header area with a grid icon. The main content area has a filter bar with 'Filter by: All organizations' and 'Sort by: Name'. Below the filter bar is a table titled 'Devices'. The table has columns for a checkbox, NAME, LAST ACTIVITY, and CREATED AT. The first row of the table is highlighted with a red box and contains the following data:

	NAME	LAST ACTIVITY	CREATED AT
<input checked="" type="checkbox"/>	<a href="#">ESP8266</a>	a few seconds ago	2019-05-22 11:50:55 -04:00

ESP8266 - Ubidots



# EJERCICIO II - UBIDOTS



API Label - Ubidots

## EJERCICIO II - UBIDOTS

Abrir el sketch.ino (ubidotsLed). Copiar el **token predeterminado de ubidots** a la variable token del **sketch.ino**. Conectarse a una red WiFi (SSID Y PASS). Copiar el **API Label del ESP8266 de ubidots** (Ver diapositiva anterior) a la variable **DEVICE**.



# EJERCICIO II - UBIDOTS

ubidotsLed \$

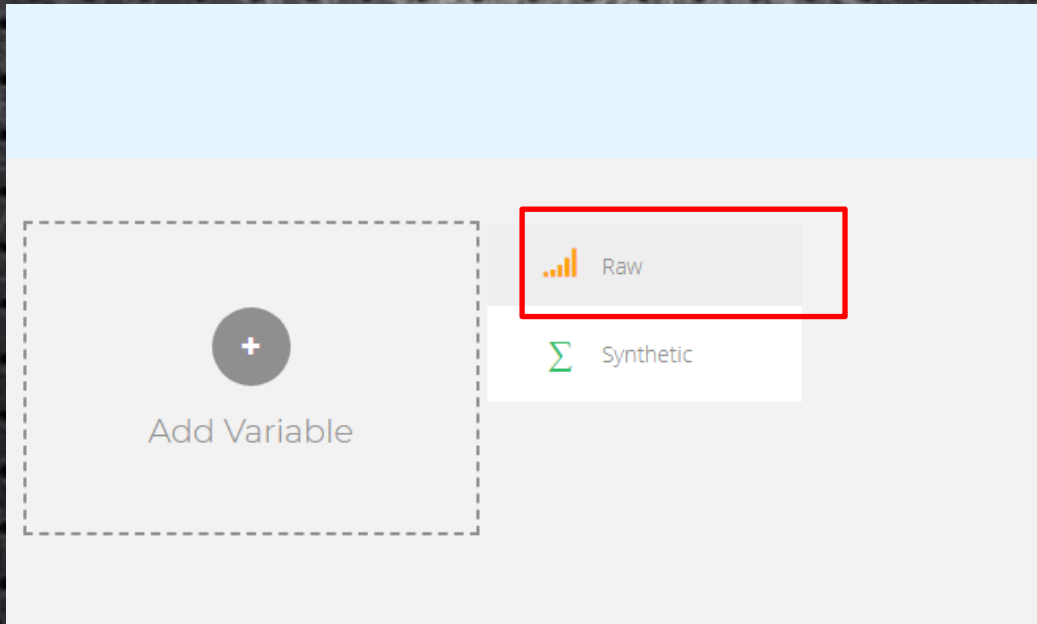
```
#include "UbidotsMicroESP8266.h"

#define DEVICE "COPIAR API LABEL "
#define VARIABLE "COPIAR API Label de la nueva variable"
#define TOKEN "Copiar Token de ubidots"

#define WIFISSID "Red WiFi" // Put here your Wi-Fi SSID
#define PASSWORD "Contraseña de la red WiFi" // Put here y
```

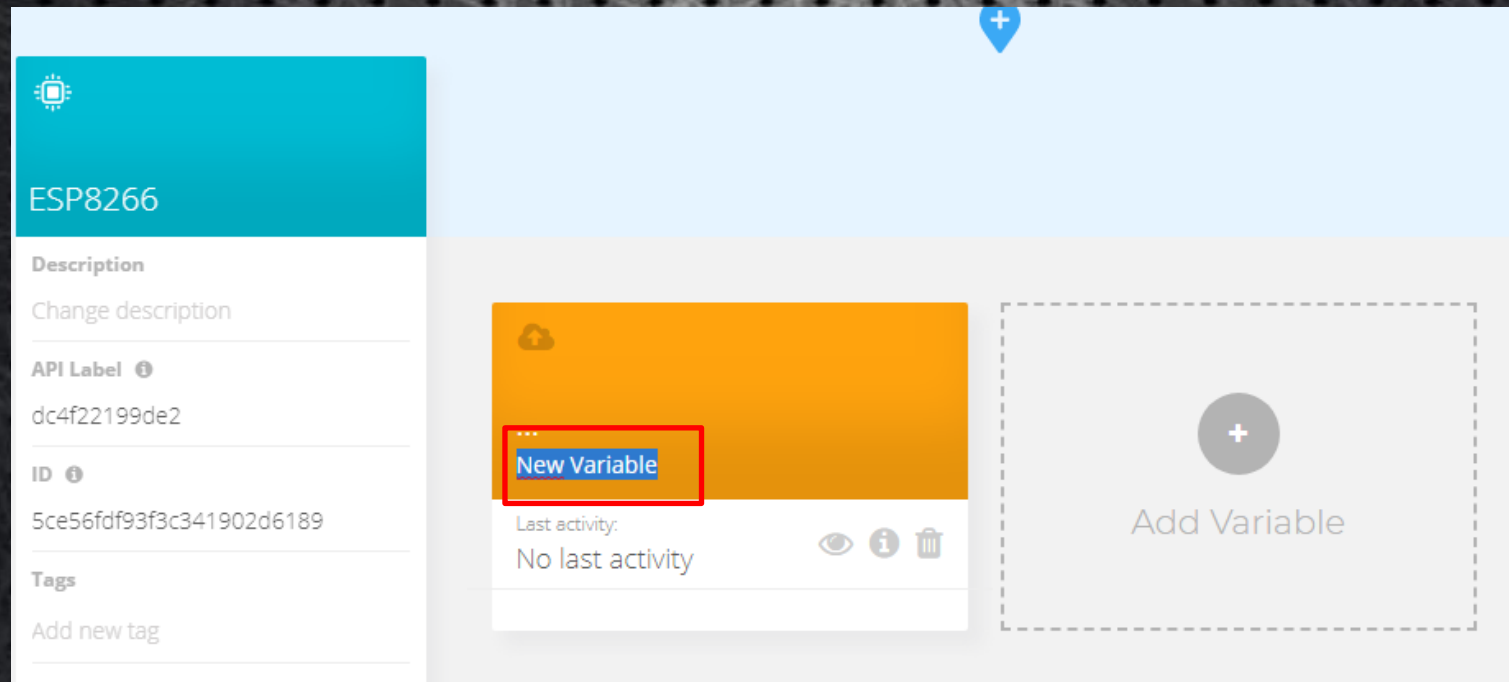


# EJERCICIO II - UBIDOTS



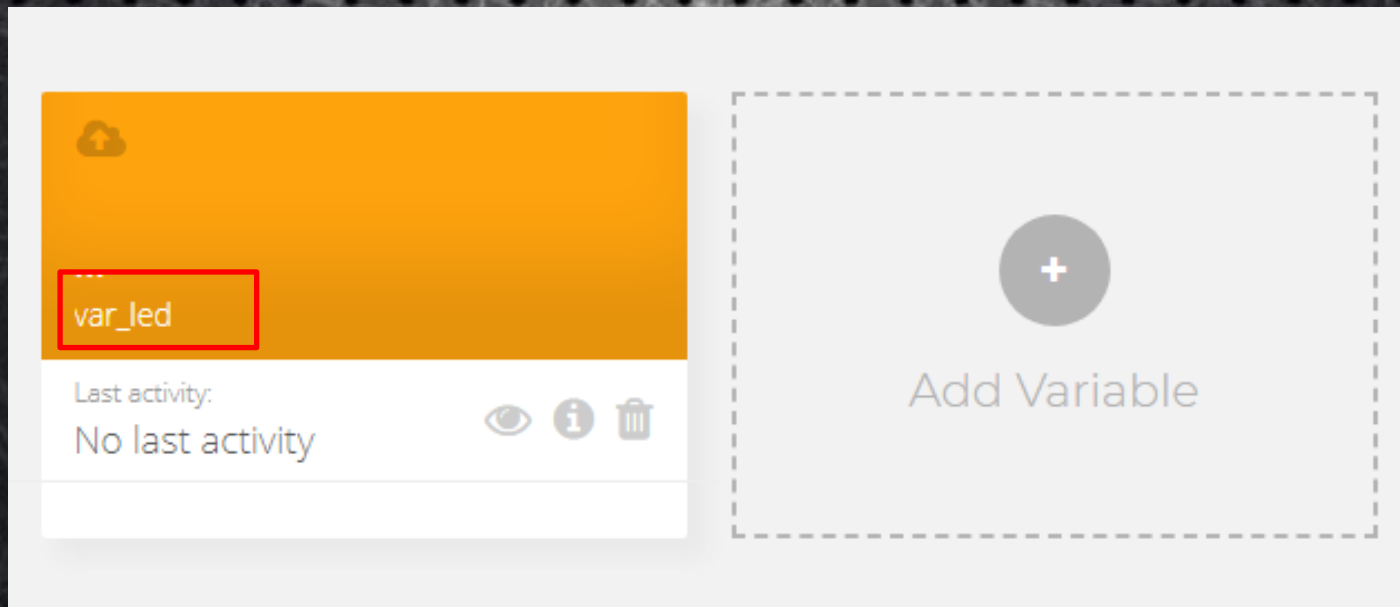
Raw - Ubidots

# EJERCICIO II - UBIDOTS



New variable -> var\_led - Ubidots

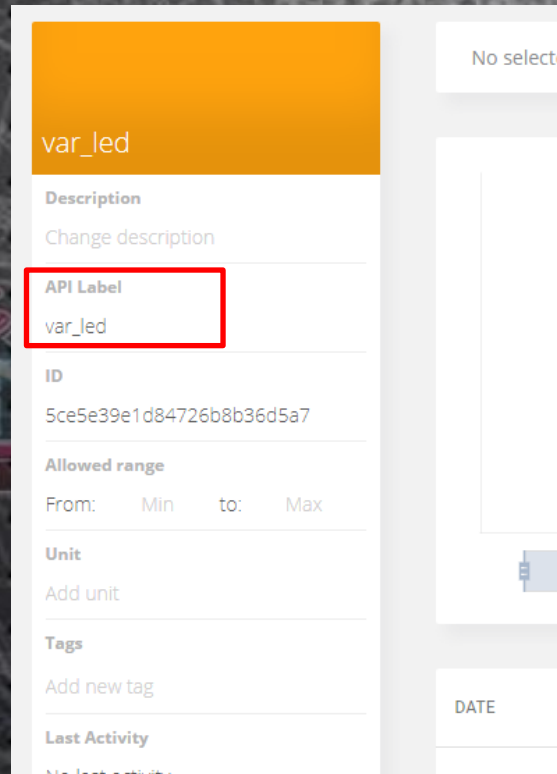
# EJERCICIO II - UBIDOTS



var\_led- Ubidots



# EJERCICIO II - UBIDOTS



The image shows a screenshot of the Ubidots web interface for configuring a variable named 'var\_led'. The variable is represented by an orange square. The configuration page includes several sections: 'Description' with a 'Change description' link, 'API Label' with the value 'var\_led' (highlighted by a red rectangle), 'ID' with the value '5ce5e39e1d84726b8b36d5a7', 'Allowed range' with 'From', 'Min', 'to', and 'Max' fields, 'Unit' with an 'Add unit' link, 'Tags' with an 'Add new tag' link, and 'Last Activity' with a 'No last activity' message. On the right side, there is a 'No selected' button and a 'DATE' label.

var\_led

Description  
Change description

API Label  
var\_led

ID  
5ce5e39e1d84726b8b36d5a7

Allowed range  
From: Min to: Max

Unit  
Add unit

Tags  
Add new tag

Last Activity  
No last activity

No selected

DATE

API Label - Ubidots

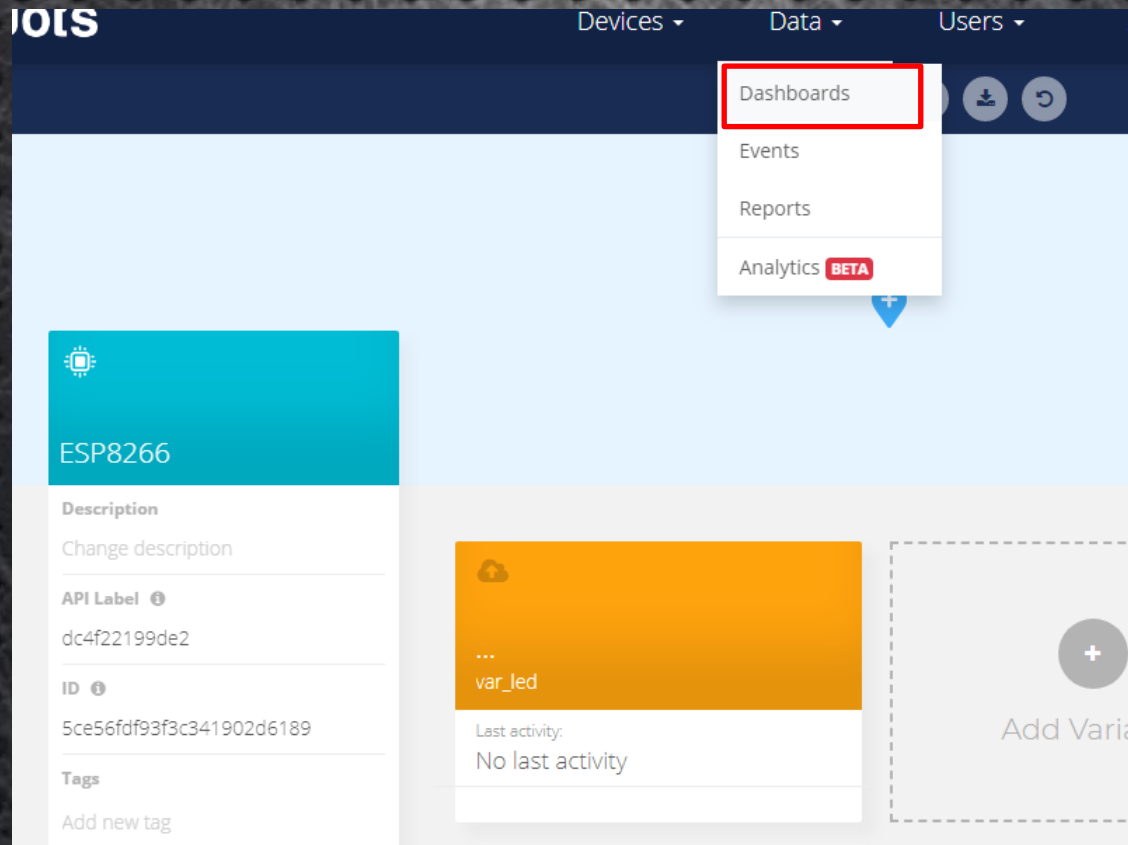
# EJERCICIO II - UBIDOTS

Copiar el **API Label** (Ver diapositiva anterior)  
a la variable **VARIABLE** del sketch.ino

```
ubidotsLed $  
#include "UbidotsMicroESP8266.h"  
  
#define DEVICE "COPIAR API LABEL "  
#define VARIABLE "COPIAR API Label de la nueva variable"  
#define TOKEN "Copiar Token de ubidots"  
  
#define WIFISSID "Red WiFi" // Put here your Wi-Fi SSID  
#define PASSWORD "Contraseña de la red WiFi" // Put here y
```



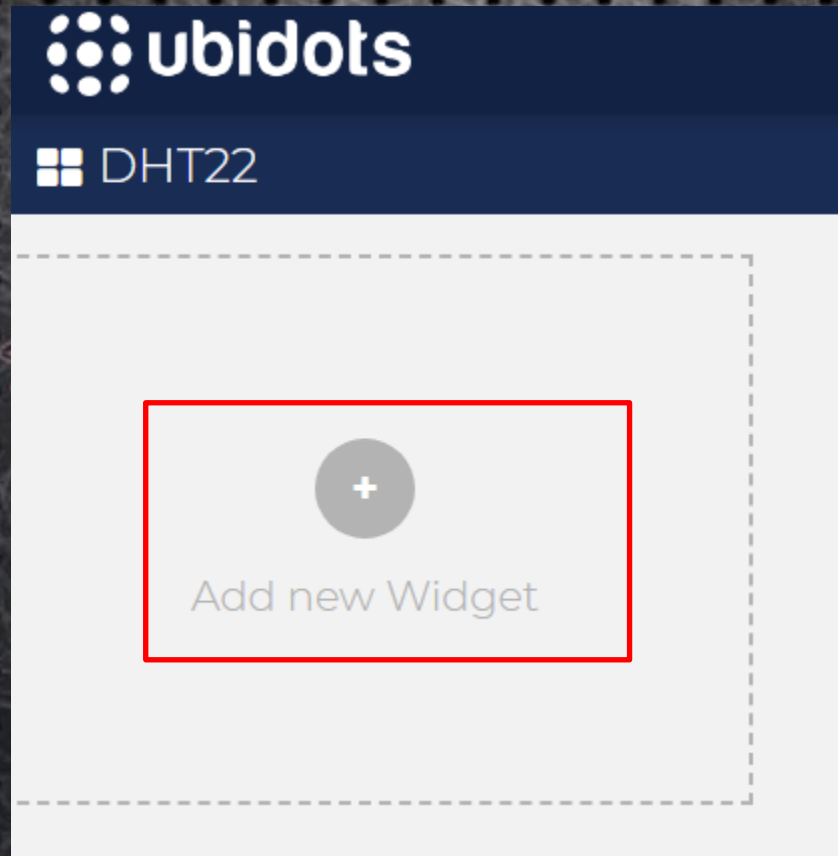
# EJERCICIO II - UBILOTS



Dashboards - Ubidots

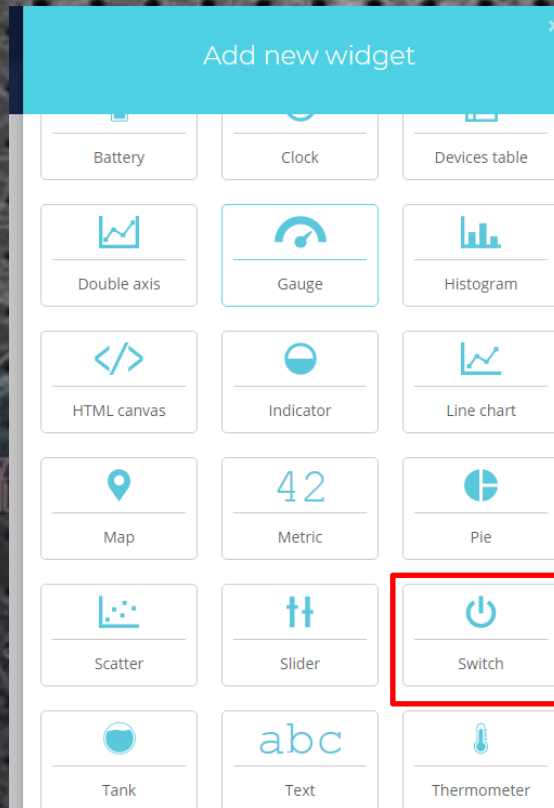


# EJERCICIO II - UBIDOTS



Add new Widget - Ubidots

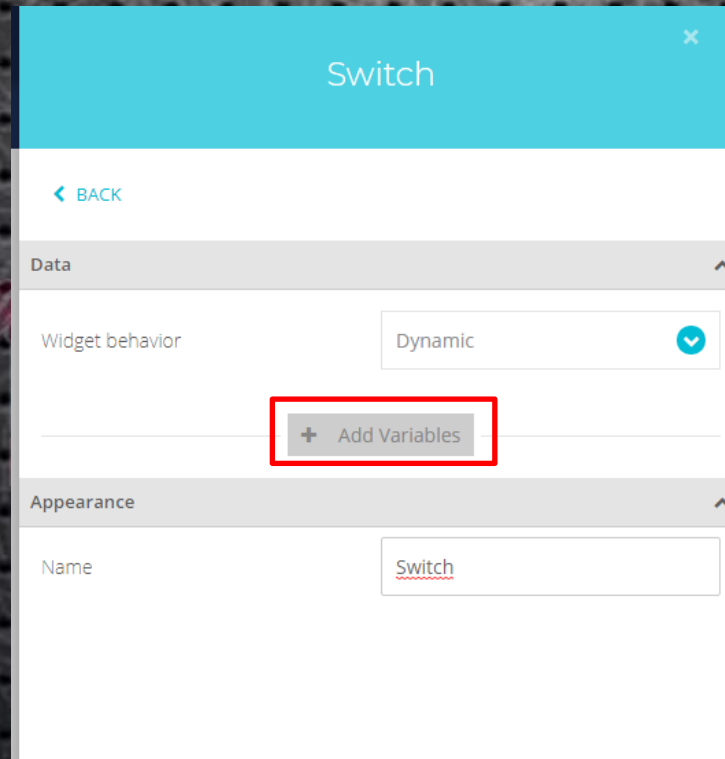
# EJERCICIO II - UBIDOTS



Switch - Ubidots



# EJERCICIO II - UBIDOTS

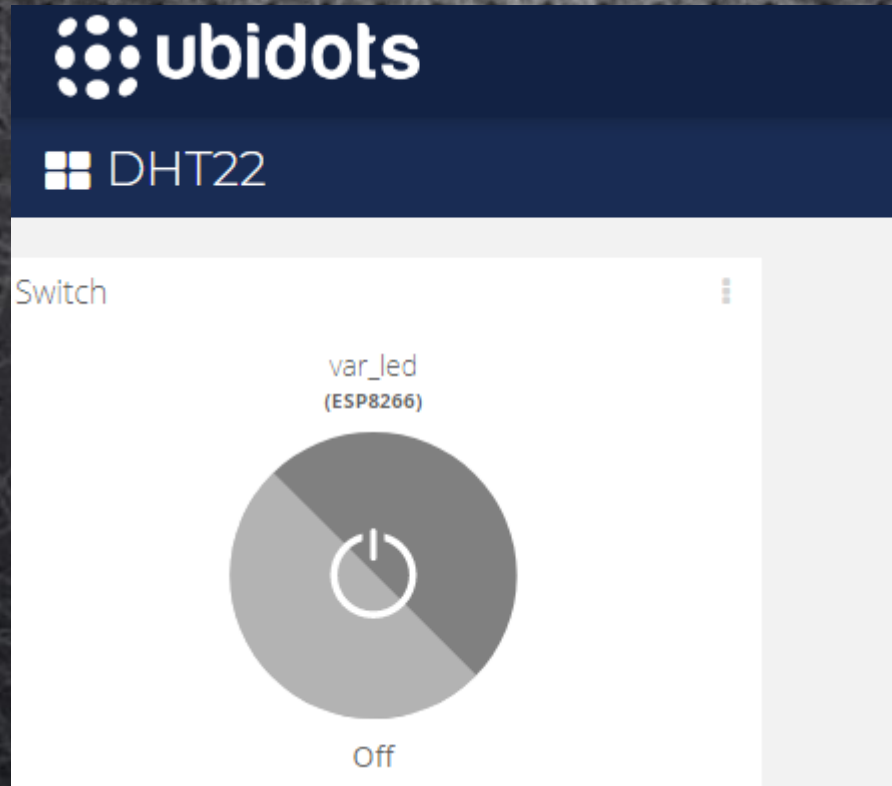


The screenshot shows the configuration interface for a 'Switch' widget in Ubidots. The interface has a teal header with the title 'Switch' and a close button. Below the header is a 'BACK' button. The main content is divided into two sections: 'Data' and 'Appearance'. In the 'Data' section, the 'Widget behavior' is set to 'Dynamic'. Below this, there is a red-bordered button labeled '+ Add Variables'. In the 'Appearance' section, the 'Name' is set to 'Switch'.

Add variables -> var\_led - Ubidots



# EJERCICIO II - UBIDOTS



Switch var\_led - Ubidots



GRACIAS