



Cloud plataform thingspeak

Guarda, 17 de Junho 2017

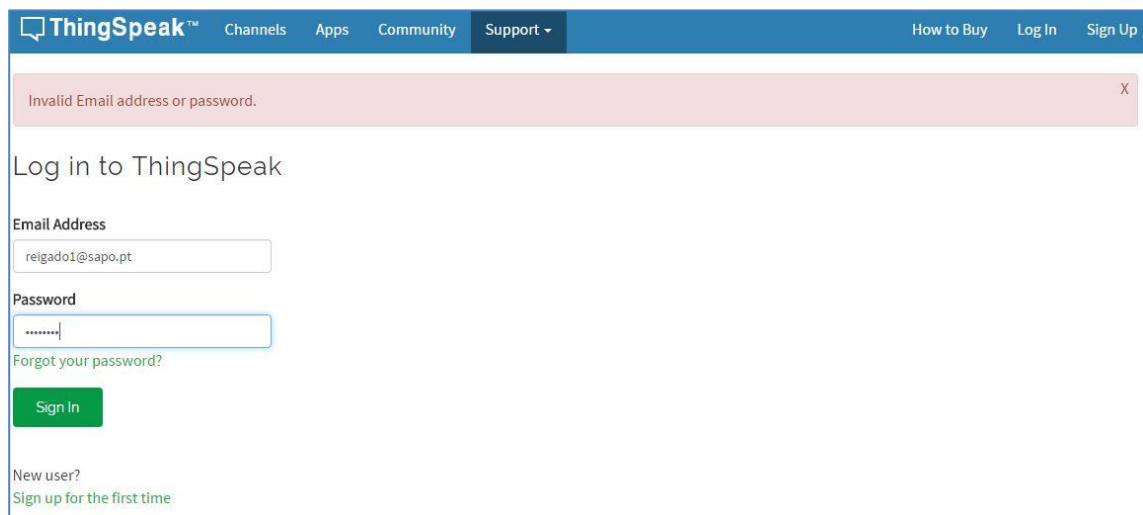
TUTORIAIS APRESENTADOS:

- **Tutorial 1** – Criar um canal no Thingspeak;
- **Tutorial 2** – Como instalar a placa ESP8266 com o IDE do Arduino;
- **Tutorial 3** - Como receber dados do Thingspeak no twitter, usando as App ThingTweet e React.

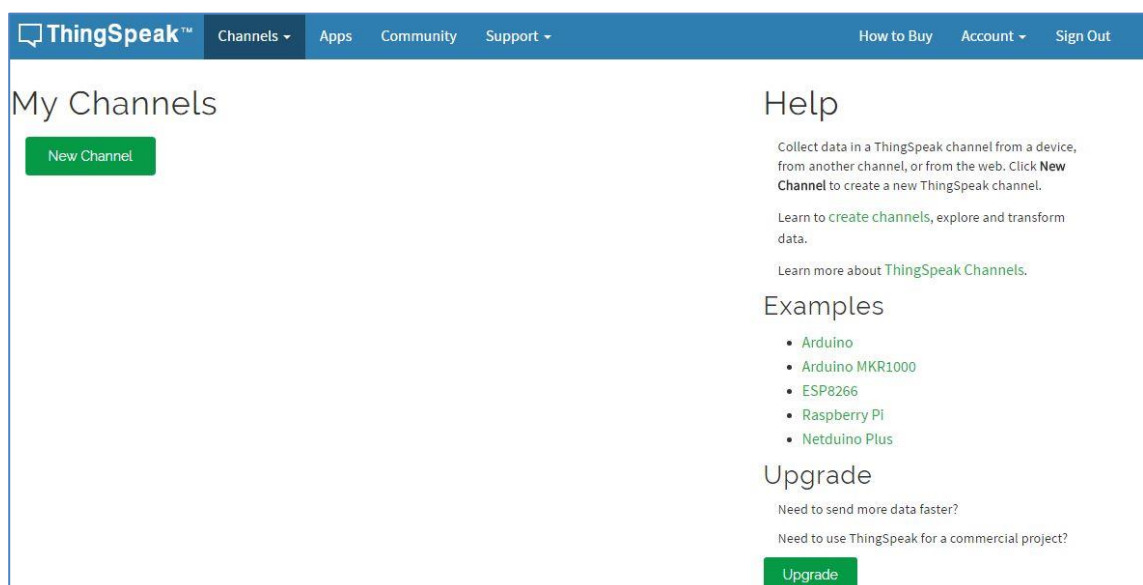
Tutorial 1 – Criar um canal no Thingspeak;

1 - Registo na API Thingspeak :

1.1– Registe-se no site Thingspeak :



1.2– Crie um canal no thingspeak: Channels>New Channels



1.3 - Atribuir nome do canal, descrição, Field1:

Dentro do New Channel, dê um nome a este canal, atribua uma descrição e escolha o nome para o seu primeiro gráfico “Celsius”.

ThingSpeak™ Channels Apps Community Support How to Buy Account Sign Out

New Channel

Name

Description

Field 1 ☒

Field 2 ☐

Field 3 ☐

Field 4 ☐

Field 5 ☐

Field 6 ☐

Help

Channels store all the data that a ThingSpeak application collects. Each channel includes eight fields that can hold any type of data, plus three fields for location data and one for status data. Once you collect data in a channel, you can use ThingSpeak apps to analyze and visualize it.

Channel Settings

- Channel Name:** Enter a unique name for the ThingSpeak channel.
- Description:** Enter a description of the ThingSpeak channel.
- Field#:** Check the box to enable the field, and enter a field name. Each ThingSpeak channel can have up to 8 fields.
- Metadata:** Enter information about channel data, including JSON, XML, or CSV data.
- Tags:** Enter keywords that identify the channel. Separate tags with commas.
- Latitude:** Specify the position of the sensor or thing that collects data in decimal degrees. For example, the latitude of the city of London is 51.5072.
- Longitude:** Specify the position of the sensor or thing that collects data in decimal degrees. For example, the longitude of the city of London is -0.1275.

1.4 – Torne o seu canal público para futuras visualizações, selecionando a opção “Make Public”

ThingSpeak™ Channels Apps Community Support How to Buy Account Sign Out

Field 2 ☐

Field 3 ☐

Field 4 ☐

Field 5 ☐

Field 6 ☐

Field 7 ☐

Field 8 ☐

Metadata

Tags
(Tags are comma separated)

Make Public ☒

Channel Settings

- Metadata:** Enter information about channel data, including JSON, XML, or CSV data.
- Tags:** Enter keywords that identify the channel. Separate tags with commas.
- Latitude:** Specify the position of the sensor or thing that collects data in decimal degrees. For example, the latitude of the city of London is 51.5072.
- Longitude:** Specify the position of the sensor or thing that collects data in decimal degrees. For example, the longitude of the city of London is -0.1275.
- Elevation:** Specify the position of the sensor or thing that collects data in meters. For example, the elevation of the city of London is 35.052.
- Make Public:** If you want to make the channel publicly available, check this box.
- URL:** If you have a website that contains information about your ThingSpeak channel, specify the URL.
- Video ID:** If you have a YouTube™ or Vimeo® video that displays your channel information, specify the full path of the video URL.

Using the Channel

You can get data into a channel from a device, website, or another ThingsSpeak channel. You can then visualize data and transform it using [ThingSpeak Apps](#).

See [Tutorial: ThingSpeak and MATLAB](#) for an example of measuring dew point from a weather station that acquires data from an Arduino® device.

[Learn More](#)

1.5 – De seguida verifique que o canal foi criado com o nome Temperature_ESP8266 e com o Channel ID: 266625 :

The screenshot shows the ThingSpeak interface for a channel named 'Temperatura_ESP8266'. The channel ID is 266625, the author is 'reigado', and the access is private. The channel is currently in 'Private View'. There are buttons for 'Add Visualizations', 'Data Export', 'MATLAB Analysis', and 'MATLAB Visualization'. The 'Channel Stats' section shows it was created and updated 'less than a minute ago' with 0 entries. A 'Field 1 Chart' is visible at the bottom.

1.6 – No passo seguinte deve copiar a chave do Write API Keys:

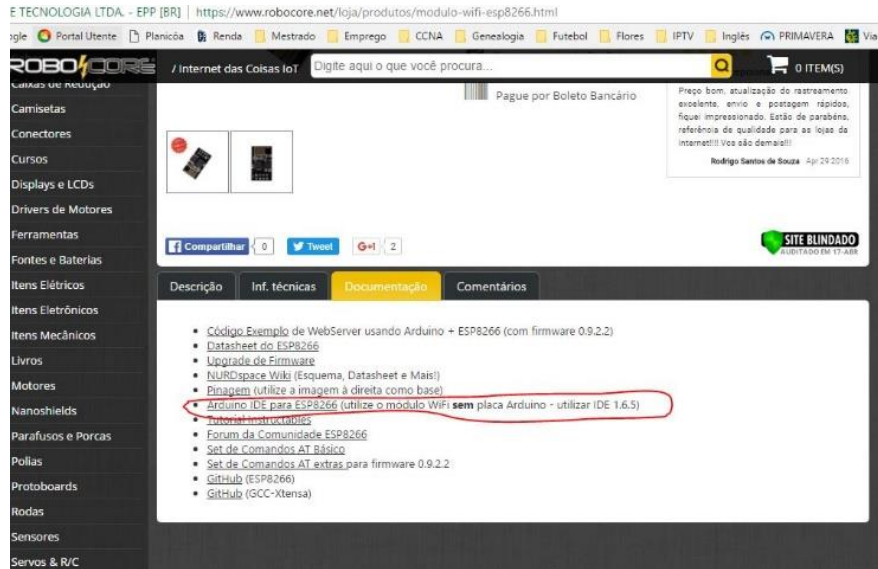
The screenshot shows the 'API Keys' section of the 'Temperatura_ESP8266' channel. It displays a 'Write API Key' of '97WD7S5WQG1XIKMM'. There is a button to 'Generate New Write API Key'. The 'Help' section explains that API keys enable writing data to a channel or reading data from a private channel. The 'API Keys Settings' section lists two types of keys: 'Write API Key' (used to write data) and 'Read API Keys' (used to allow others to view private channel feeds and charts).

Agora deve atualizar os dados em seu canal com uma solicitação HTTP do formulário:
https://api.thingspeak.com/update?api_key=YOUR_CHANNEL_API_KEY&field1=99

Posteriormente o fluxo de dados pode ser visualizado em:
https://api.thingspeak.com/channels/YOUR_CHANNEL_ID

Tutorial 2 – Configuração do módulo Wi-fi ESP8266 através do IDE arduino .

2.1 - Adicione a placa wi-fi ESP8266 com o IDE do Arduino. No site do RoboCore pesquise por EPS8266 e abra o link assinalado:



2.2 – Copie o endereço assinalado:

Installing with Boards Manager

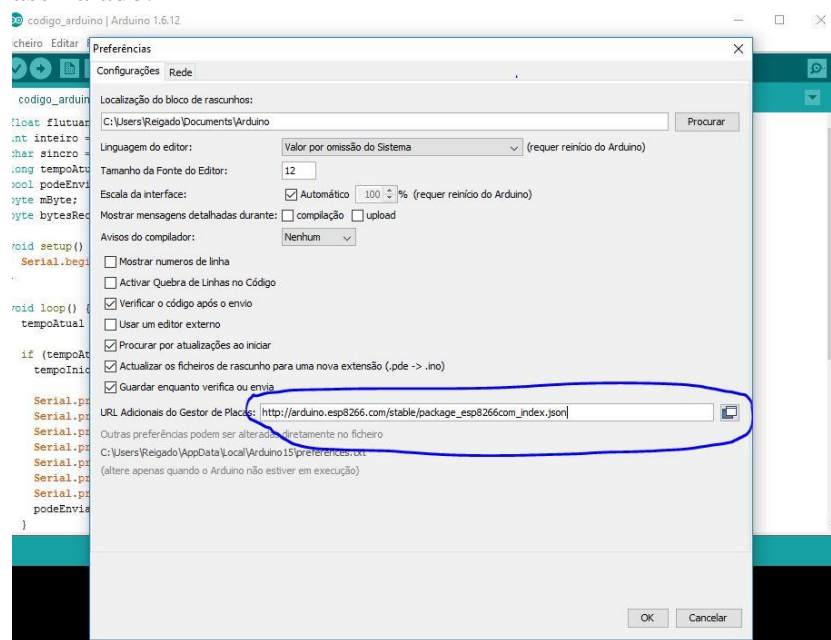
Starting with 1.6.4, Arduino allows installation of third-party platform packages using Boards Manager. We have packages available for Windows, Mac OS, and Linux (32 and 64 bit).

- Install Arduino 1.6.8 from the [Arduino website](#).
- Start Arduino and open Preferences window.
- Enter http://arduino.esp8266.com/stable/package_esp8266com_index.json into Additional Board Manager URLs field. You can add multiple URLs, separating them with commas.
- Open Boards Manager from Tools > Board menu and install esp8266 platform (and don't forget to select your ESP8266 board from Tools > Board menu after installation).

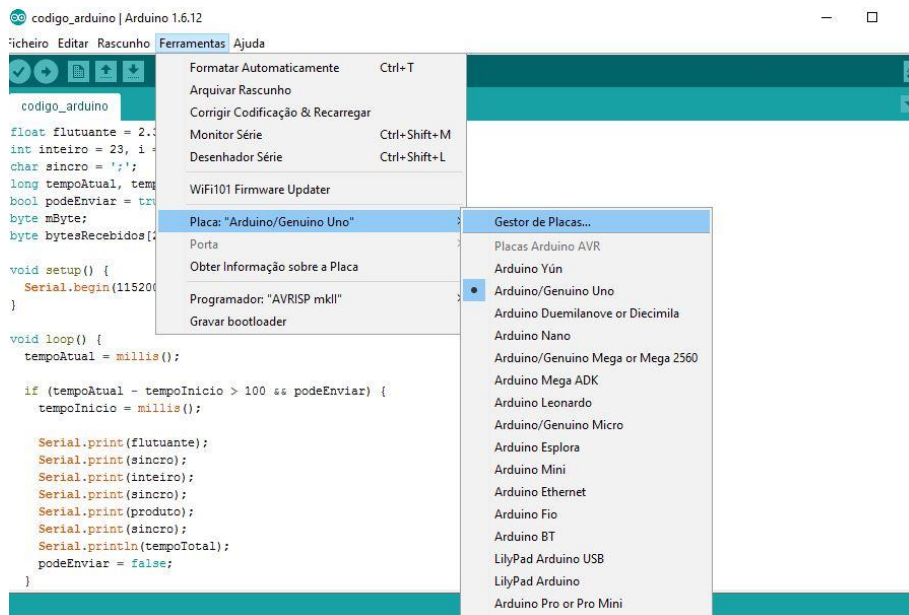
The best place to ask questions related to this core is ESP8266 community forum: <http://www.esp8266.com/arduino>. If you find this forum or the ESP8266 Boards Manager package useful, please consider supporting it with a donation.

[paypal](#) [donate](#)

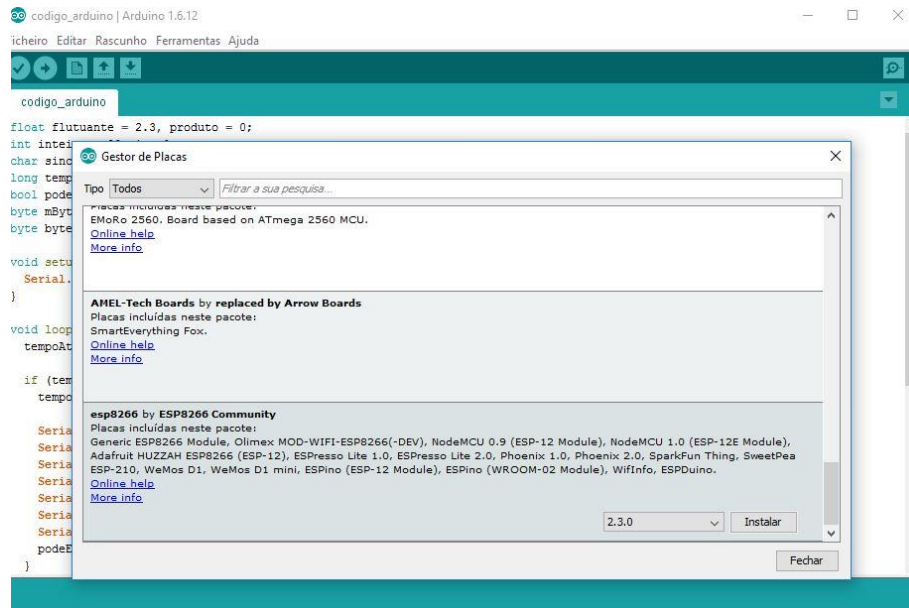
2.3 – Abra o programa Arduino e nas preferências o link anterior no local assinalado:



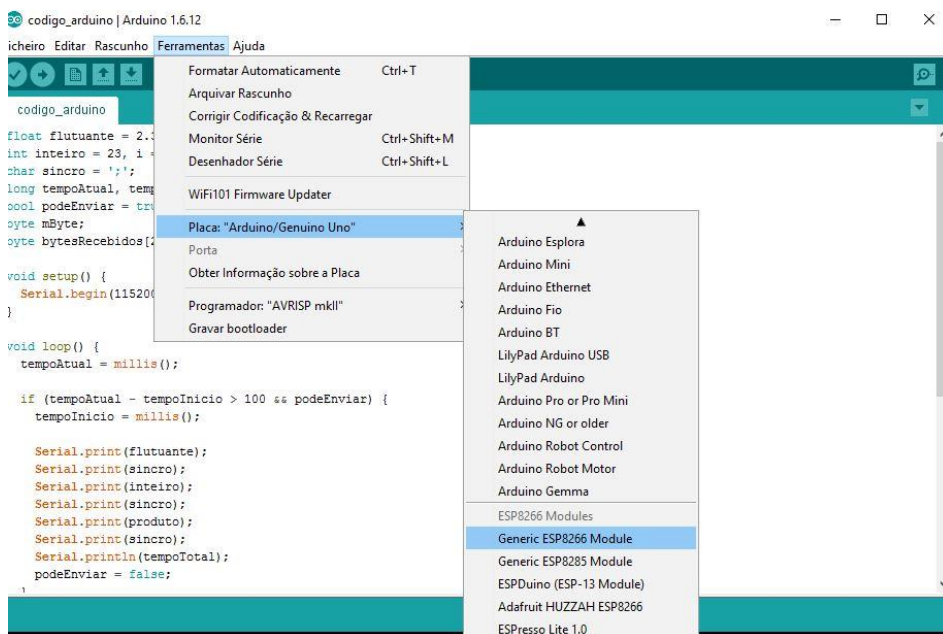
2.4 – Nas Ferramentas > Placa > Gestor Placas



2.5 - Escolha e instale a biblioteca ESP8266 que se encontra no fim da lista.



2.6 – Agora vá a Ferramentas>Placa>Escolha o Módulo ESP8266



Tutorial 3 - Como receber dados do Thingspeak no twitter, usando as App ThingTweet e React.

3 - Este tutorial mostra como enviar um tweet quando os dados da temperatura excedem 35°, usando as aplicações ThingTweet e React

3.1 – Faça login na sua conta Twitter.

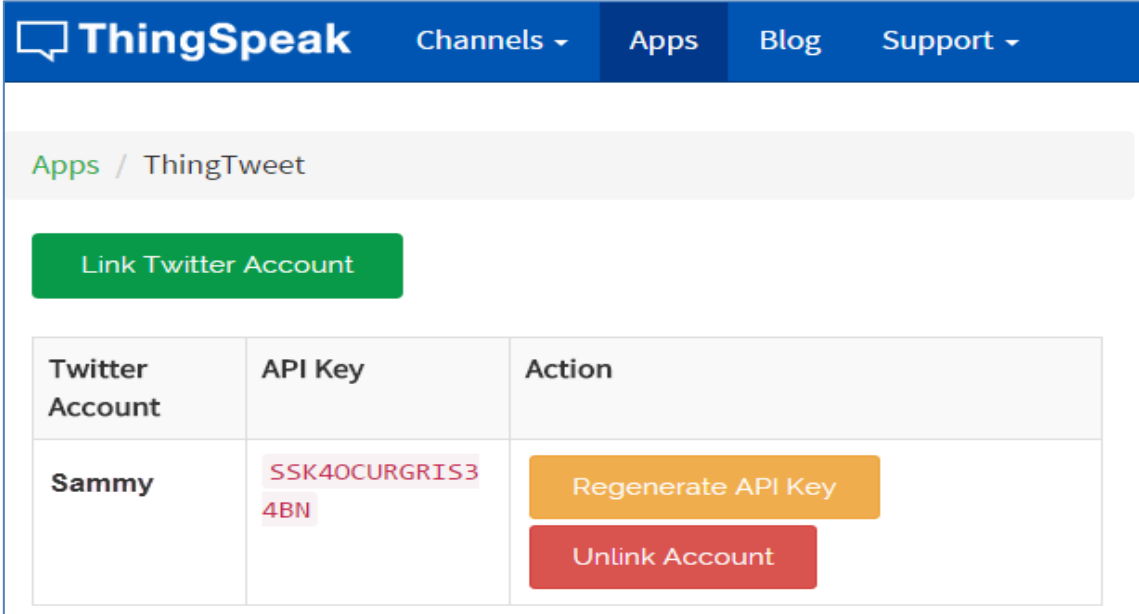
3.2 - Na página **ThingTweet**, clique em Link Twitter Account para vincular a conta do Twitter à conta Thingspeak.

3.3 - Digite nome de utilizador, senha do Twitter e clique em Autorizar aplicativo.



The screenshot shows the Twitter authorization interface. At the top, there's a Twitter logo and a 'Sign up for Twitter' link. The main heading is 'Authorize ThingTweet to use your account?'. Below this, there are input fields for 'Username or email' and 'Password', a 'Remember me' checkbox, and a 'Forgot password?' link. Two buttons, 'Authorize app' and 'Cancel', are present. To the right, the 'ThingTweet' logo is shown, along with the text 'By ThingSpeak', 'www.thingspeak.com/apps/thingtweet', and 'Twitter app for ThingSpeak.com'. Below the authorization fields, there are two sections: 'This application will be able to:' with a list of permissions (Read Tweets, See who you follow, Update profile, Post Tweets) and 'Will not be able to:' with a list of denied permissions (Access direct messages, See password). At the bottom, there is a disclaimer about revoking access and a link to the 'Applications tab' in the settings page.

3.4 – De seguida click **Back to ThingTweet** e verifica que sua conta do Twitter está vinculada ao Thingspeak:

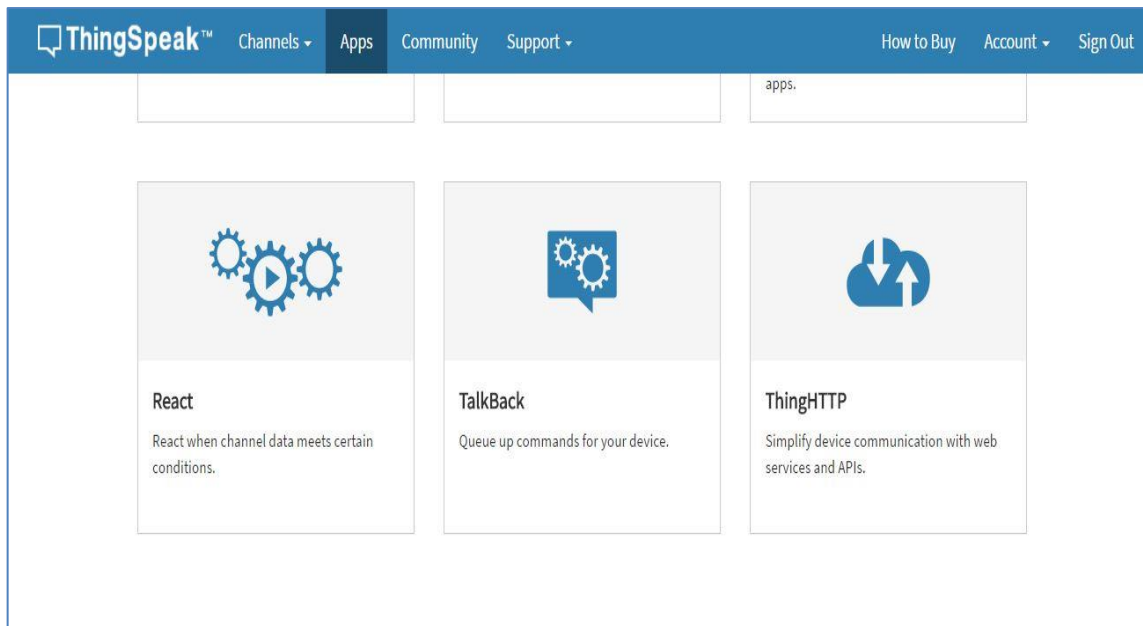


The screenshot shows the 'Apps' page on the ThingSpeak website. The top navigation bar includes the ThingSpeak logo and links for 'Channels', 'Apps', 'Blog', and 'Support'. Below the navigation bar, the page title is 'Apps / ThingTweet'. A green button labeled 'Link Twitter Account' is prominently displayed. Below this, there is a table with three columns: 'Twitter Account', 'API Key', and 'Action'.

| Twitter Account | API Key | Action |
|-----------------|----------------------|--------------------------------------|
| Sammy | SSK40CURGRIS3 4BN | Regenerate API Key Unlink Account |

Neste exemplo, o canal verifica a cada 10 minutos a temperatura ambiente e envia um aviso para o twitter.

3.5 - Na conta do Thingspeak: Apps> Reagir e clique em React:



3.6 - Atribua um nome “temperatura Tweet.”

3.7 - Defina o Tipo de condição como Numérico.

3.8 - Defina a Frequência de Teste para intervalo 10 Minutos

A screenshot of the Thingspeak 'React' app configuration page. The navigation bar at the top includes 'ThingSpeak™', 'Channels', 'Apps' (highlighted), 'Community', and 'Support'. Below the navigation bar, there is a breadcrumb trail: 'Apps / React / New'. The configuration form has four sections: 'React Name' with a text input field containing 'Temperatura Tweet'; 'Condition Type' with a dropdown menu set to 'Numeric'; 'Test Frequency' with a dropdown menu set to 'Every 10 minutes'; and 'Condition' with a dropdown menu set to 'If channel' and a sub-dropdown menu set to 'Registos - José Reigado (266625)'.

Defina a **condição** valor de temperatura **superior a 35**:

3.9 - If channel: selecione o canal de medição de temperatura.

3.10 - Field: 1(temp)

3.11 - Condição type: select **is greater than**.

3.12 - Valor da condição: insira **35**.

ThingSpeak™ Channels ▾ Apps Community Support ▾ [Learn More](#)

field

1 (Temp) ▾

is greater than ▾

35

Action

ThingTweet ▾

then tweet

Liga AC

using Twitter account

reigado1 ▾

Options

☐ Run action only the first time the condition is met

☒ Run action each time condition is met

Save React

3.13 – No final do processo, pode confirmar se os campos estão corretos e grave para poder executar os mesmos.