TALLER DE IOT – BLYNK APP

ÍNDICE DE TEMAS

COMPONENTES NECESARIOS PARA BLYNK

A Smartphone

- Android OS version 4.2+
- iOS version 9+

Blynk doesn't run on Windows Phones, Blackberries and other dead platforms. Sorry.

You can also run Blynk on emulators

IoT Hardware

Blynk can run on over 400 hardware modules. The most popular are:

- ESP8266
- ESP32
- NodeMCU
- Arduino (any model)
- Raspberry Pi (any model)
- Particle (any model)

Full list of supported hardware →

Internet Connection

To connect your hardware to the Internet, you can choose almost any module either built-in, or external shields

Supported connectivity
- WiFi
- Ethernet
- Cellular (GSM, 2g, 3g, 4g, LTE)
- Serial
- USB via your PC
- Bluetooth (BETA)

BLYNK APP

- Aplicación Drag-n-Drop para visualizar datos de sensores y controlar actuadores.
- Soporte de varios dispositivos IoT
- Soporte para iPhone y Android
- Creación de apps *standalone* a partir de un dashboard diseñado
- App Store
- Google Play

GETTING STARTED

1

Create New Account in Blynk app

Account is needed to save your projects and provide access from any smartphone you have.

☝Use a valid email address as it will be later used often

2

Create New Project

- Create New Project and choose the hardware you use.
- If you can't find the hardware you use – select Generic Board
- Choose what type of connectivity you use?
- Choose Dark or Light UI interface

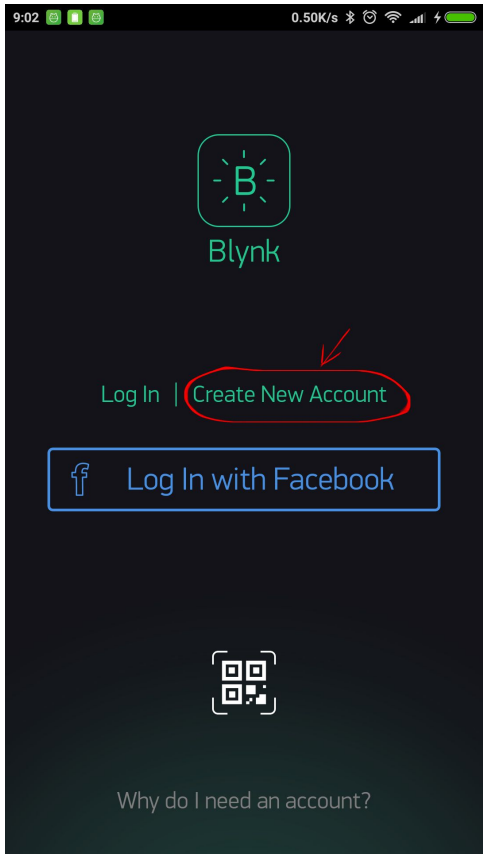
3

Get Auth Token

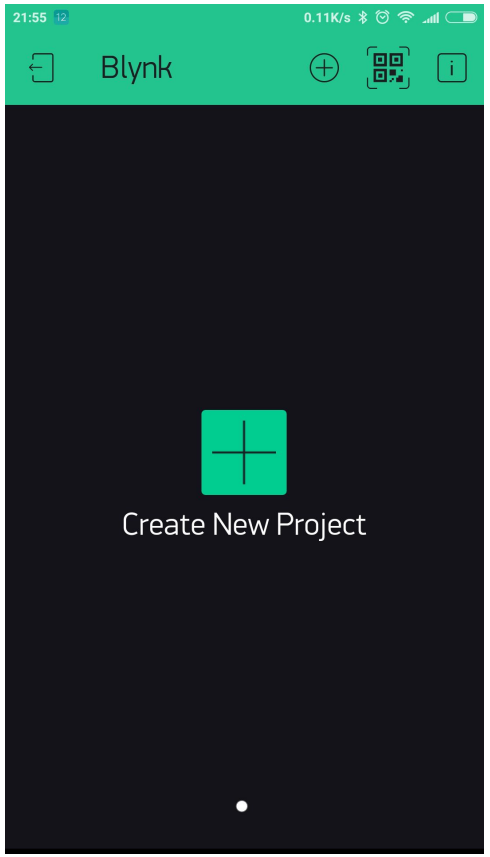
Check your inbox to see if you get an email from Blynk with the Auth Token.

You will need it later

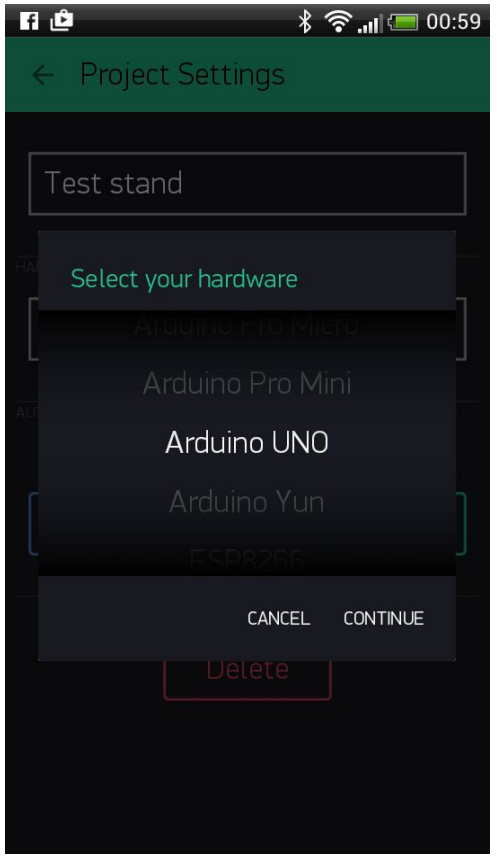
GETTING STARTED



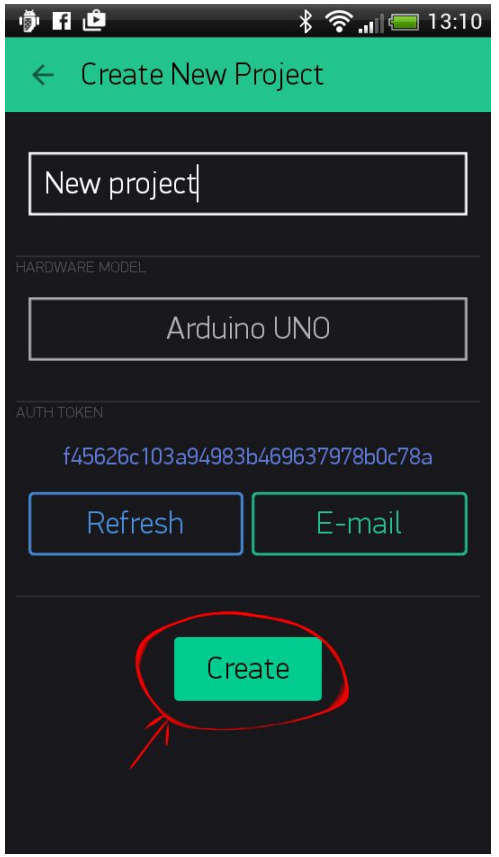
Crear nueva cuenta



Crear nuevo proyecto



Seleccionar plataforma



Obtener Auth Token

Quickstart

1 Hardware — 2 IDE — 3 Blynk Library — 4 Code — 5 Device activation

Which hardware are you using?

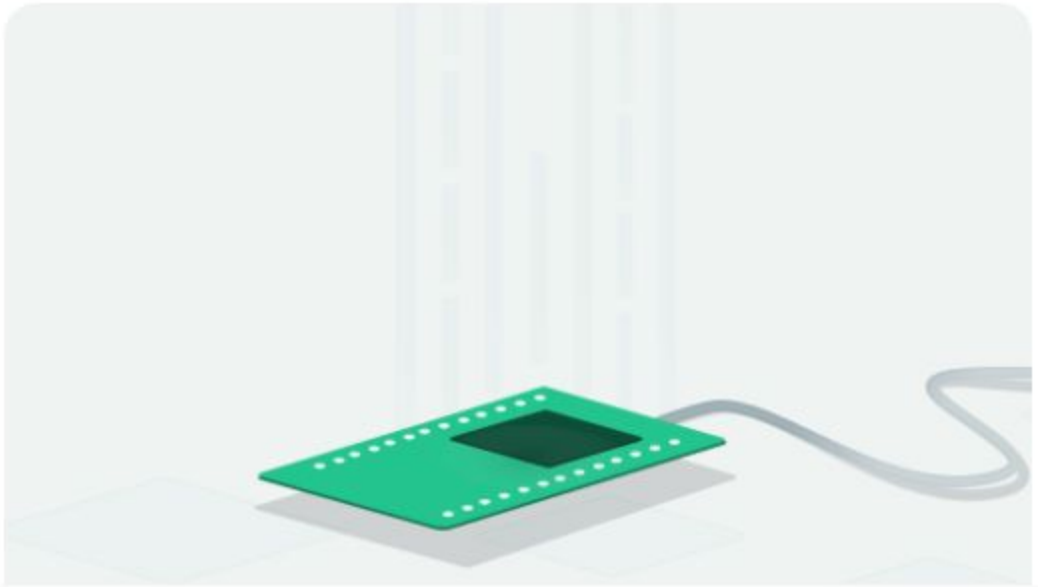
We will help you prepare the code for you board

ESP32

What is your device connectivity type

Blynk supports various connection types (BLE is not supported yet).

WiFi



Cancel Next →

Quickstart

1. Hardware
2. IDE
3. Blynk Library
4. Code
5. Device activation

Which IDE do you use?

Arduino
Download →

PlatformIO
Download →

Other

← Back

Cancel

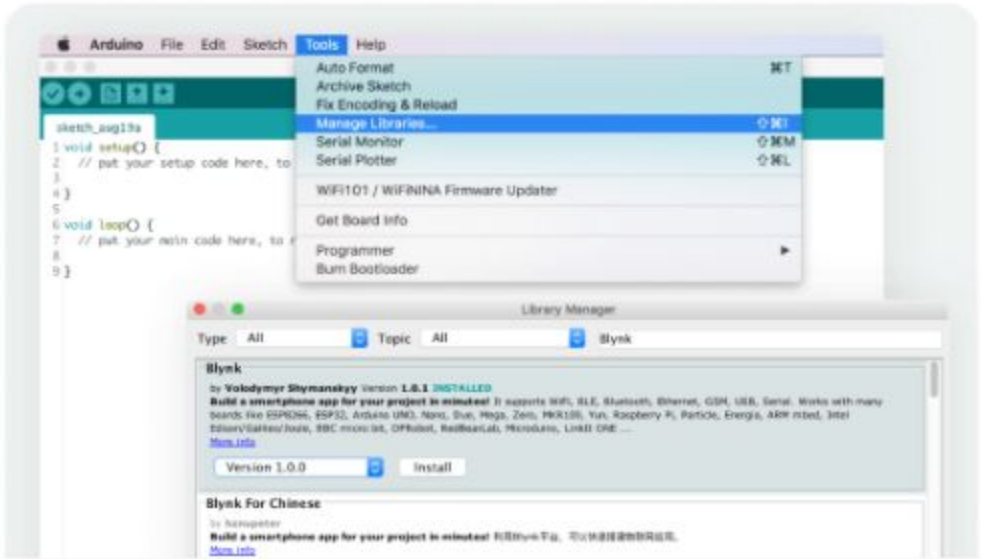
Next →

Quickstart

Hardware — IDE — 3 Blynk Library — 4 Code — 5 Device activation

Install Blynk Library for Arduino

1. Go to Arduino -Tools - Manage Libraries...
2. Search for Blynk there.
3. Choose the latest version and press Install.



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Cancel

Next →

Quickstart

Hardware — IDE — Blynk Library — 4 Code — 5 Device activation

Here is a code for your device

1. Enter your Wi-Fi network SSID (name) and password to connect your device.

* We never store or send this information anywhere. It's only used to generate the firmware code . You can leave these fields empty and manually add WiFi credentials in your sketch.

Ort-IOT

OrtIOTnew22

2. Copy code from the right panel (or download it as a file).

Copy code | Download As File

```
/*************************************************************

  This is a simple demo of sending and receiving some data.
  Be sure to check out other examples!
 *************************************************************/

// Template ID, Device Name and Auth Token are provided by the Blynk.Cloud
// See the Device Info tab, or Template settings
#define BLYNK_TEMPLATE_ID           "TMPLtwYwbm0i"
#define BLYNK_DEVICE_NAME           "Quickstart Device"
#define BLYNK_AUTH_TOKEN            "22PoXEIce4GkndQWlKoe-BaMDH6Y1-k1"
```

Cancel | Next →

BLYNK API

La API de Blynk es compatible con:

- Kits Arduino
- ESP8266
- ESP32
- Raspberry Pi
- Kits Adafruit
- Python 2, 3
- MBED
- Etc…

```
#include <ESP8266WiFi.h>
#include <BlynkSimpleEsp8266.h>

char auth[] = "YourAuthToken";
char ssid[] = "YourNetworkName";
char pass[] = "YourPassword";

void setup()
{
  Blynk.begin(auth, ssid, pass);
}

void loop() {
  Blynk.run();
}
```

BLYNK API

Control de pines Analog & Digital

Blynk puede realizar desde la misma app operaciones out-of-the-box:

- digitalWrite
- digitalRead
- analogWrite
- analogRead

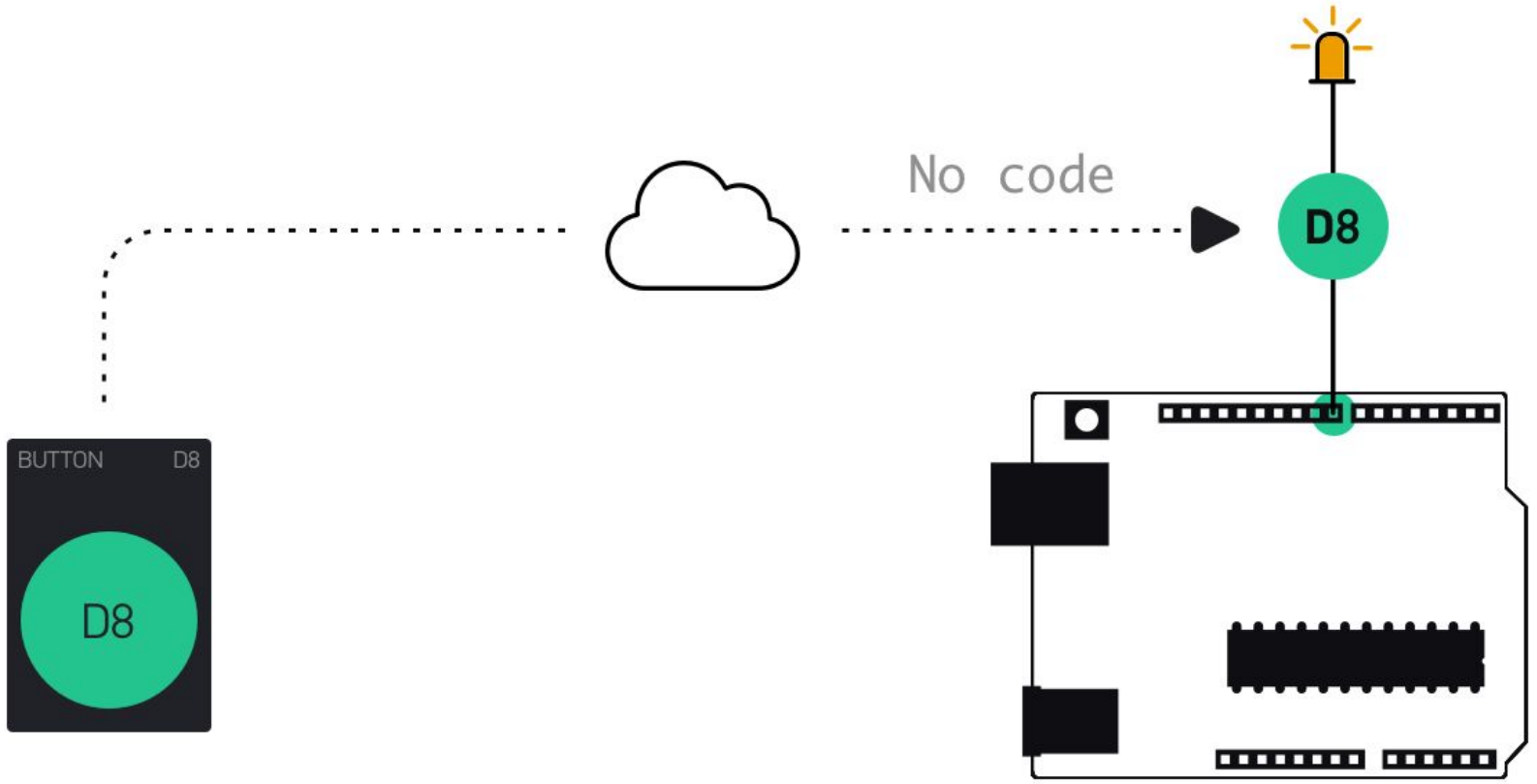
Simplemente seleccionar el pin desde la app, y realiza automáticamente la operación

Virtual Pins

- Canal de comunicación virtual entre el Hardware y Blynk.
- No tienen representación física, el programador debe definirla.
- Utilizados como interfaz para librerías de sensores y actuadores que no se controlen con funciones básicas de I/O.

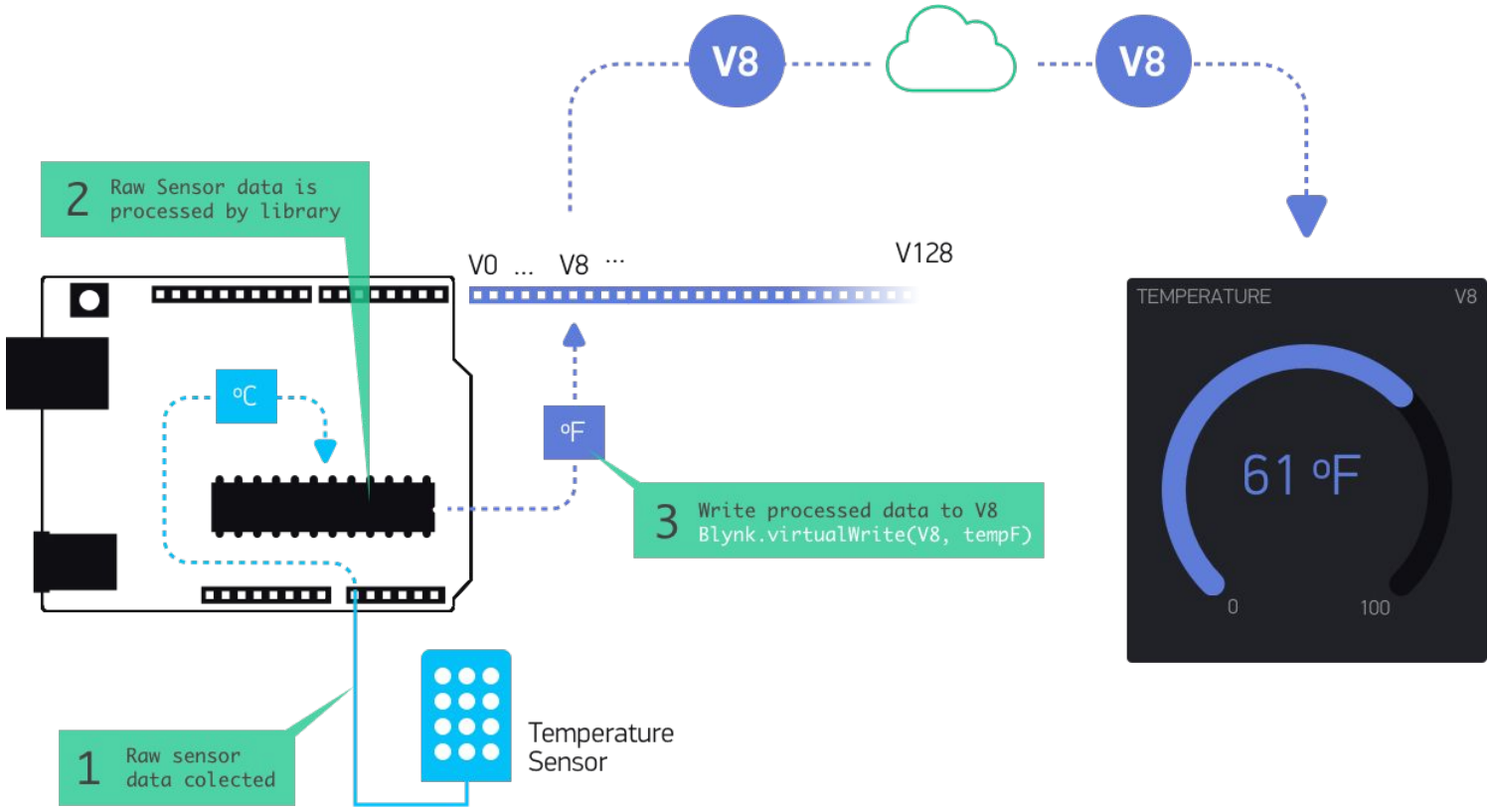
BLYNK API

Control de pines Analog & Digital



BLYNK API

Virtual Pins



BLYNK API

BlynkTimer

Se trata de no agregar código al loop, sino controlar todo de forma temporizada y un poco más lenta.

Blynk provee BlynkTimer:

- 16 timers configurables
- Envío periódico de datos (no mas de 10/seg)
- Pensado para Blynk.virtualWrite(vpin, data)

TODO

TODO

RESUMEN *FOR DUMMIES*

- **Blynk** = Plataforma IoT
- **API** = Application Programming Interface (… librería de código)
- **Pasos para utilizar Blynk:**
  1. Descargar la App en algún Smartphone.
  2. Crear una cuenta, y obtener el Auth Token.
  3. Descargar la API al Arduino IDE.
  4. Abrir algún ejemplo en el Arduino IDE, o construir un sketch propio.
  5. Generar un proyecto en la app, y agregar los Widgets correspondientes.

¿PREGUNTAS, CONSULTAS HASTA ACÁ?

ENLACES ÚTILES

- Página oficial: https://blynk.io/
- Documentación oficial: http://docs.blynk.cc/
- Documentación de firmware: http://docs.blynk.cc/#blynk-firmware
- Compendio de tutoriales iniciales: http://help.blynk.cc/
- Constructor de ejemplos: https://examples.blynk.cc/
- Getting started: http://help.blynk.cc/getting-started-library-auth-token-code-examples
- Virtual Pins: http://help.blynk.cc/getting-started-library-auth-token-code-examples/blynk-basics/what-is-virtual-pins
- Blynk Web Dashboard: http://blynk-client.surge.sh/#/connection

FIN