



# EVALUATION BOARD



## Interface development and configuration between cloud backend and dashboard

This tutorial shows how to integrate [TTN \(The Things Network\)](#) and [TagoIO](#) to verify incoming data from the backend into the dashboard. This tutorial will continue the [hypertext 16](#) **Configuring basic dashboard with data from the cloud**.

### Necessary tools:

- ❑ To have read the text **Basic dashboard configuration with cloud data**.
- ❑ Link to the Code that will be executed in the tutorial [“LoRaWAN TagoIO DashBoard”](#).

# 1. Device Authorization

Log in to the [TagoIO](#) platform page. Go to the “**Device**” page and click on the “**authorization**” button. This authorization is used when you need to grant access to external services to your devices.

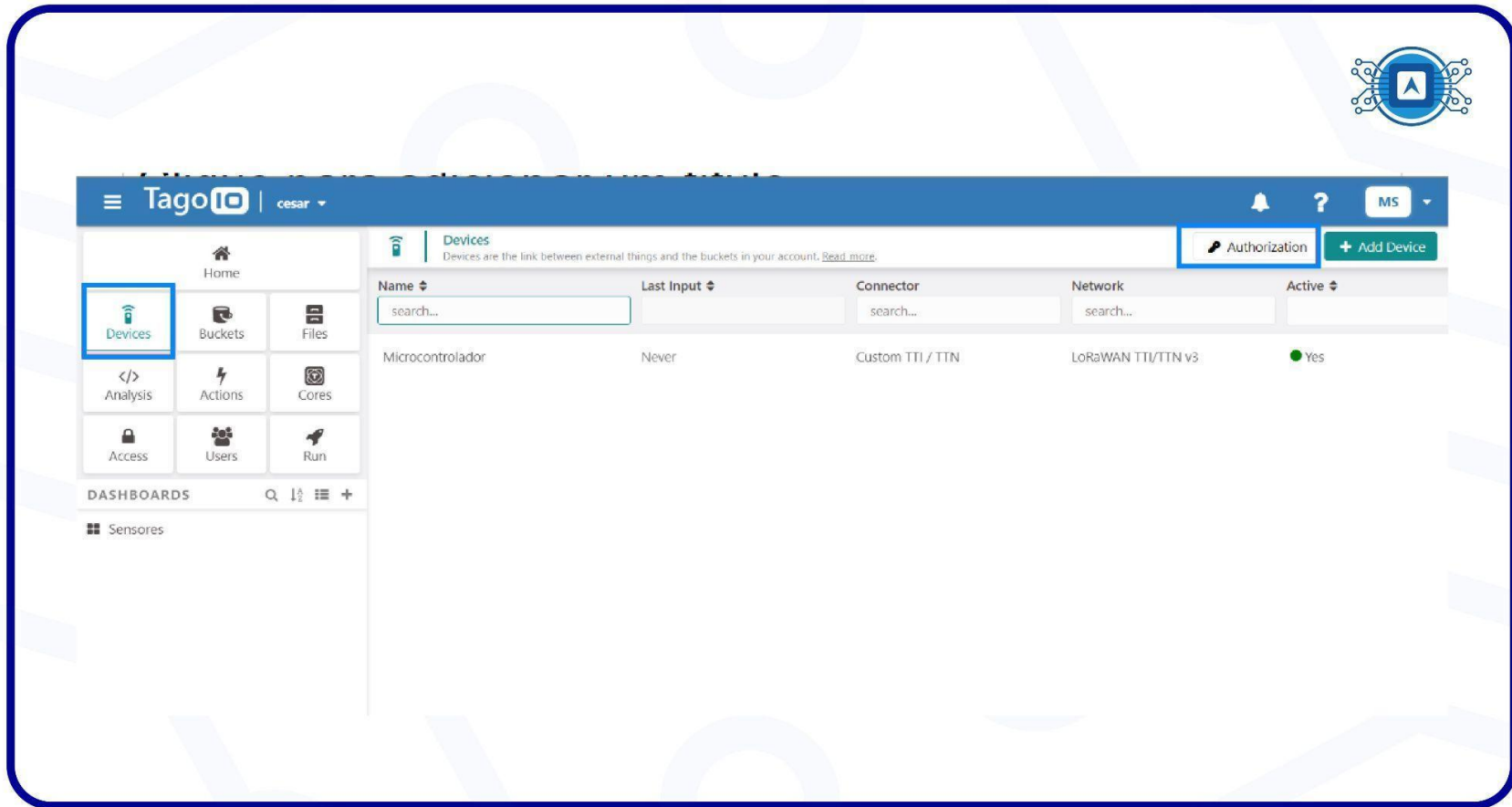


Image 1: Device Authorization. Screenshot by the author.

Once you are redirected to the “**Service Authorization**” page, fill in the “**(A) Name**” field and select “**(B) Generate**”. Once you have created the authorization key “**(C) copy**” the key to add it later in **TTN application integration**, as shown in image 2.

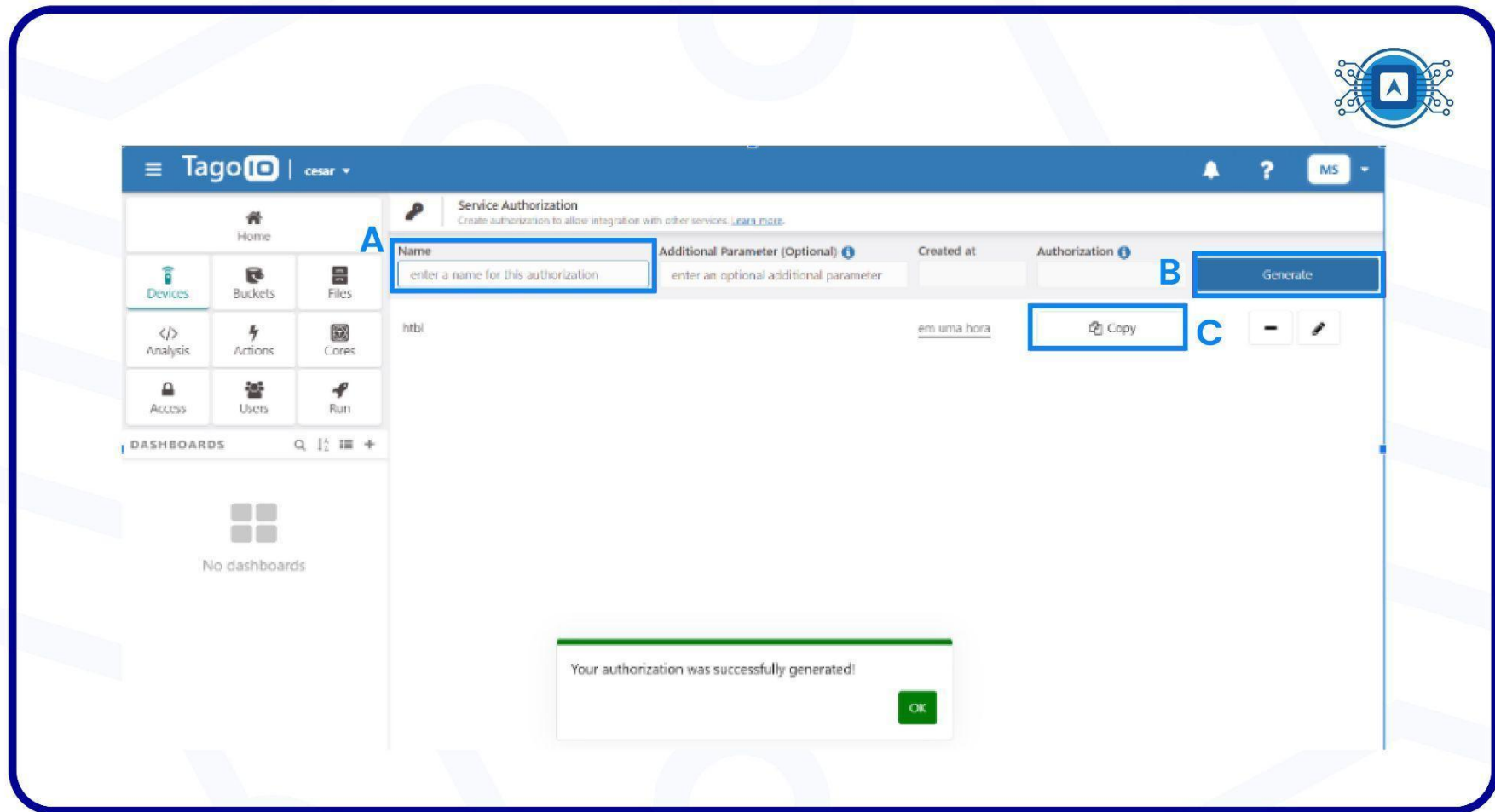


Image 2: Copying the authorization key. Source: Screenshot by the author.

## 2.TTN and TagoIO integration

In this step, go to your [TTN \(The Things Network\)](#) account, to start the integration procedure with **TTN** and the **TagoIO** platform. For this purpose, the “[Webhook](#)” Template will be used. Therefore, once you have the key copied, click on “**(A) Applications**” then select “**(B) Integrations**” and select the application “**(C) Webhooks**” as shown in image 3. Finally, click on “**(D) Add webhook**”.

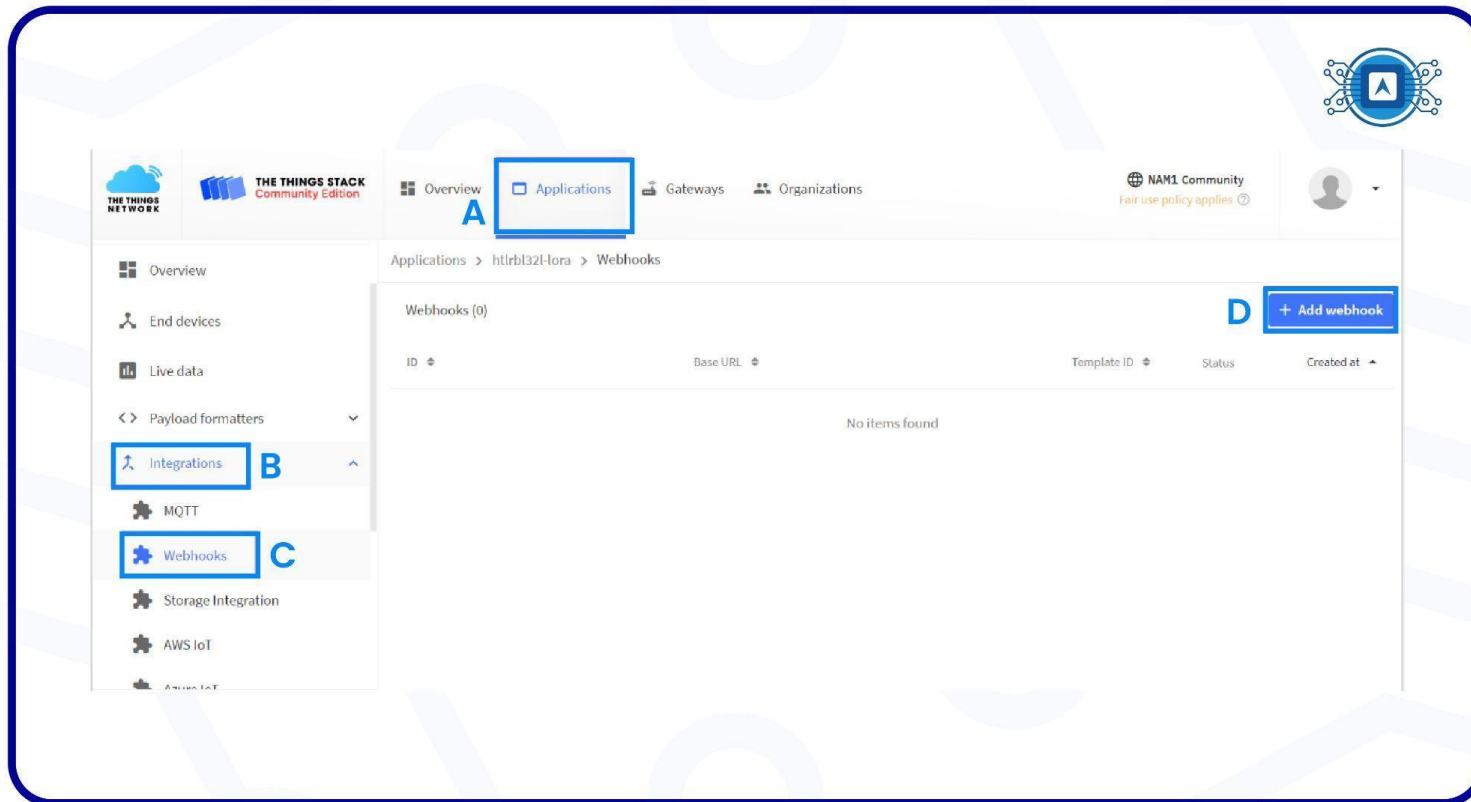


Image 3: Starting the integration procedure with TTN and the TagoIO platform. Source: Screenshot by the author.

Then select TagoIO, as in image 4.

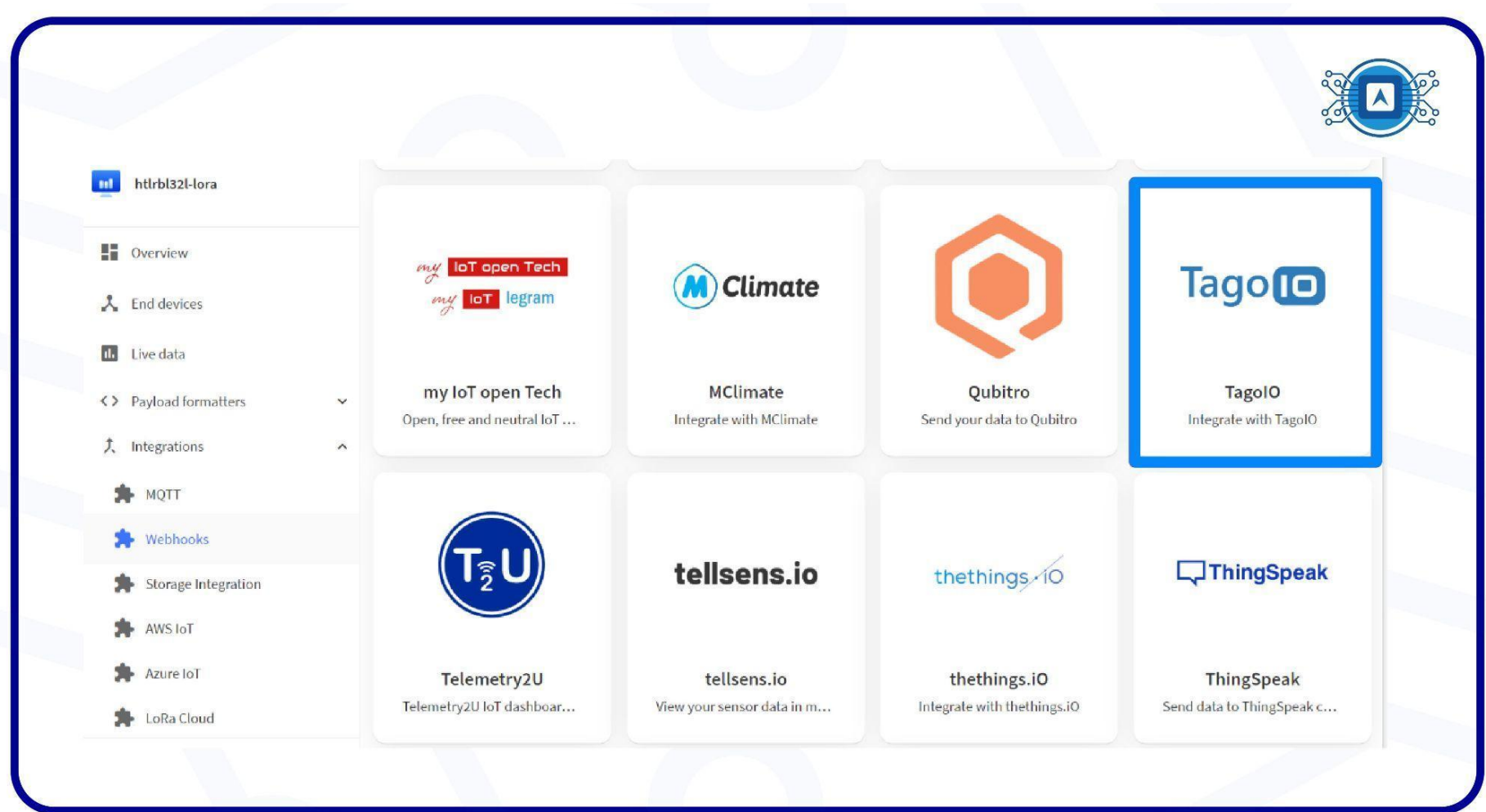


Image 4: Select TagoIO platform. Source: Screenshot by the author.

Add an “(A) ID” for the webhook and paste the generated security key in the “(B) Authorization” field and then click “(C) create tagoio webhook”. As shown in image 5.

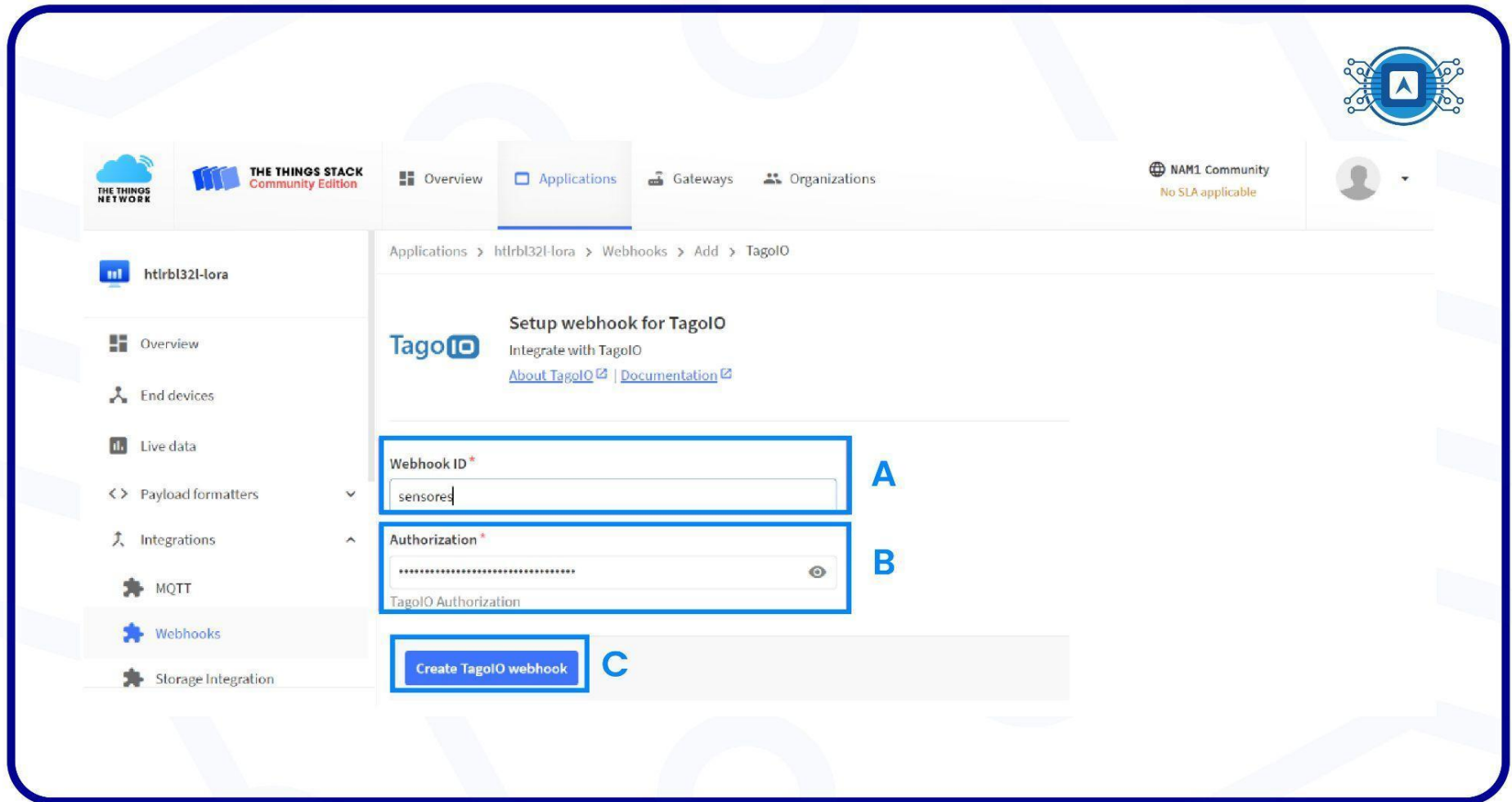


Image 5: TagoIO webhook creation page. Source: Screenshot by the author.

We can see the “**Webhook**” created, in image 6.

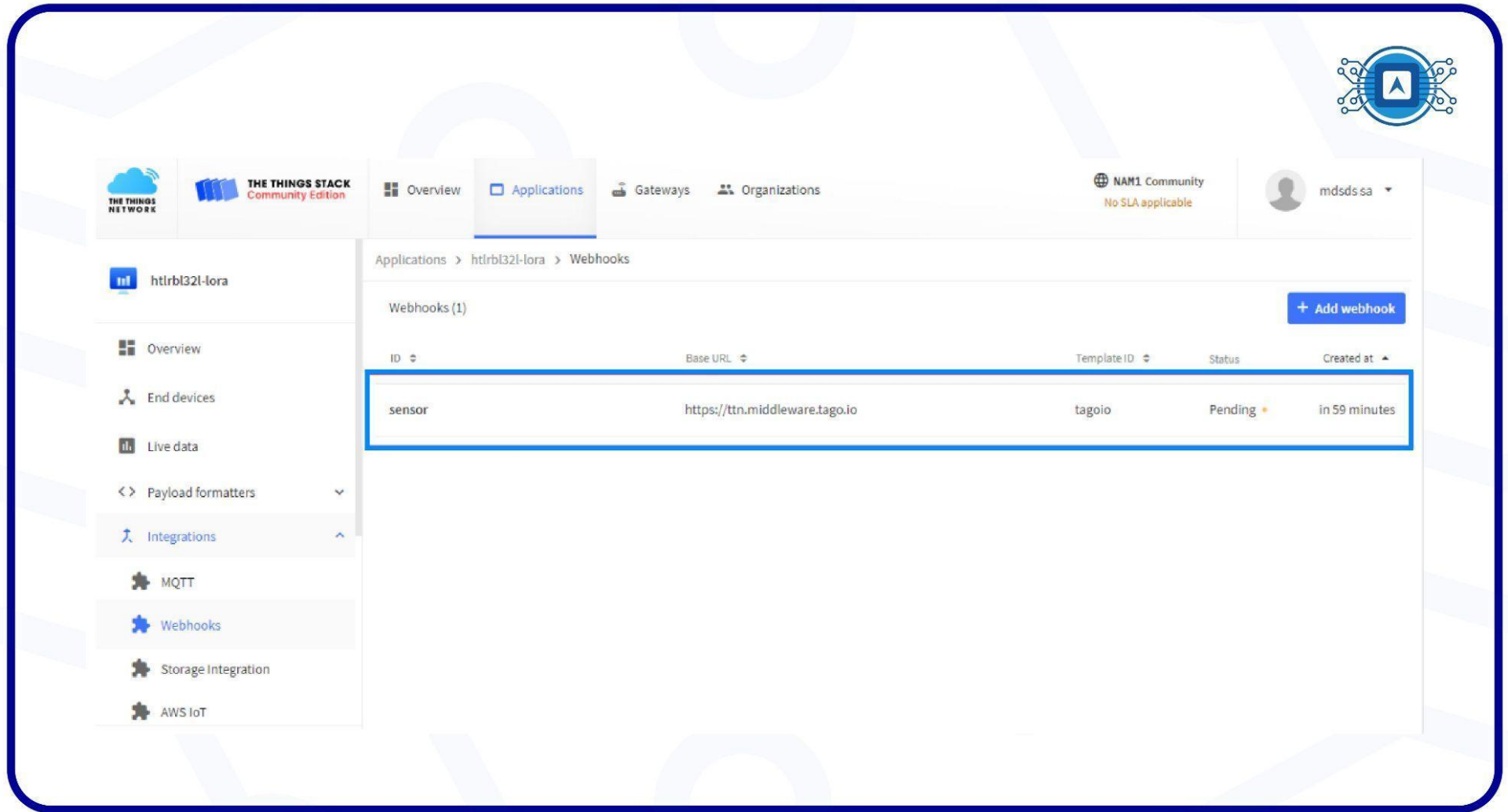


Image 6: TagoIO webhook creation page. Source: Screenshot by the author.

## 5. Dashboard

**Dashboard** is a graphical interface that provides real-time visualization of temperature, humidity, performance indicators, home environment monitoring, etc. It is on **Dashboard** that the user will place his **widgets** to view and interact with the data, all in real time. To start this process click on add “**Add dashboard**”.

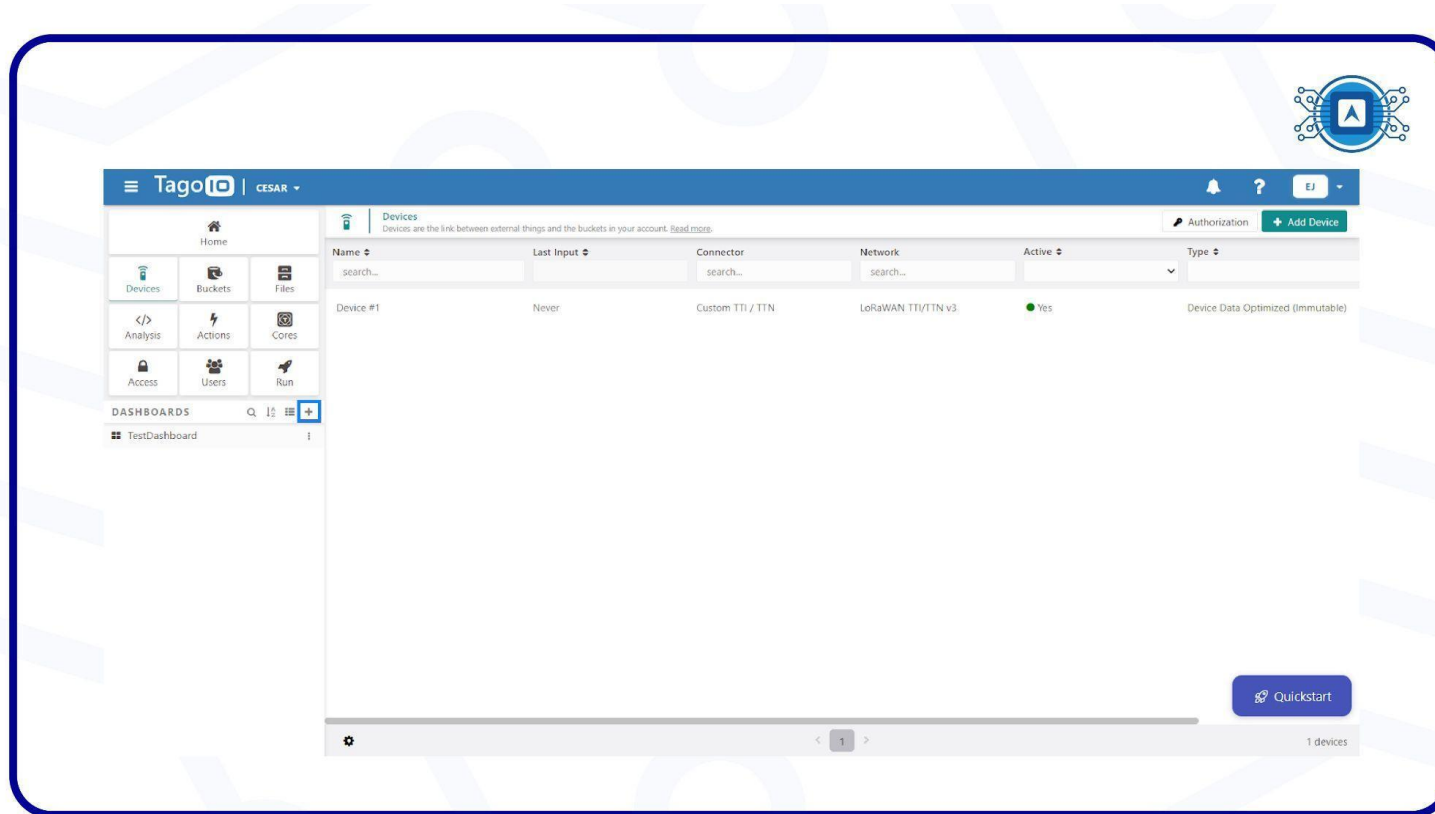


Image 7: Add dashboard. Source: Screenshot by the author.



The next step is to add “**Add widget**”, as shown in image 8.

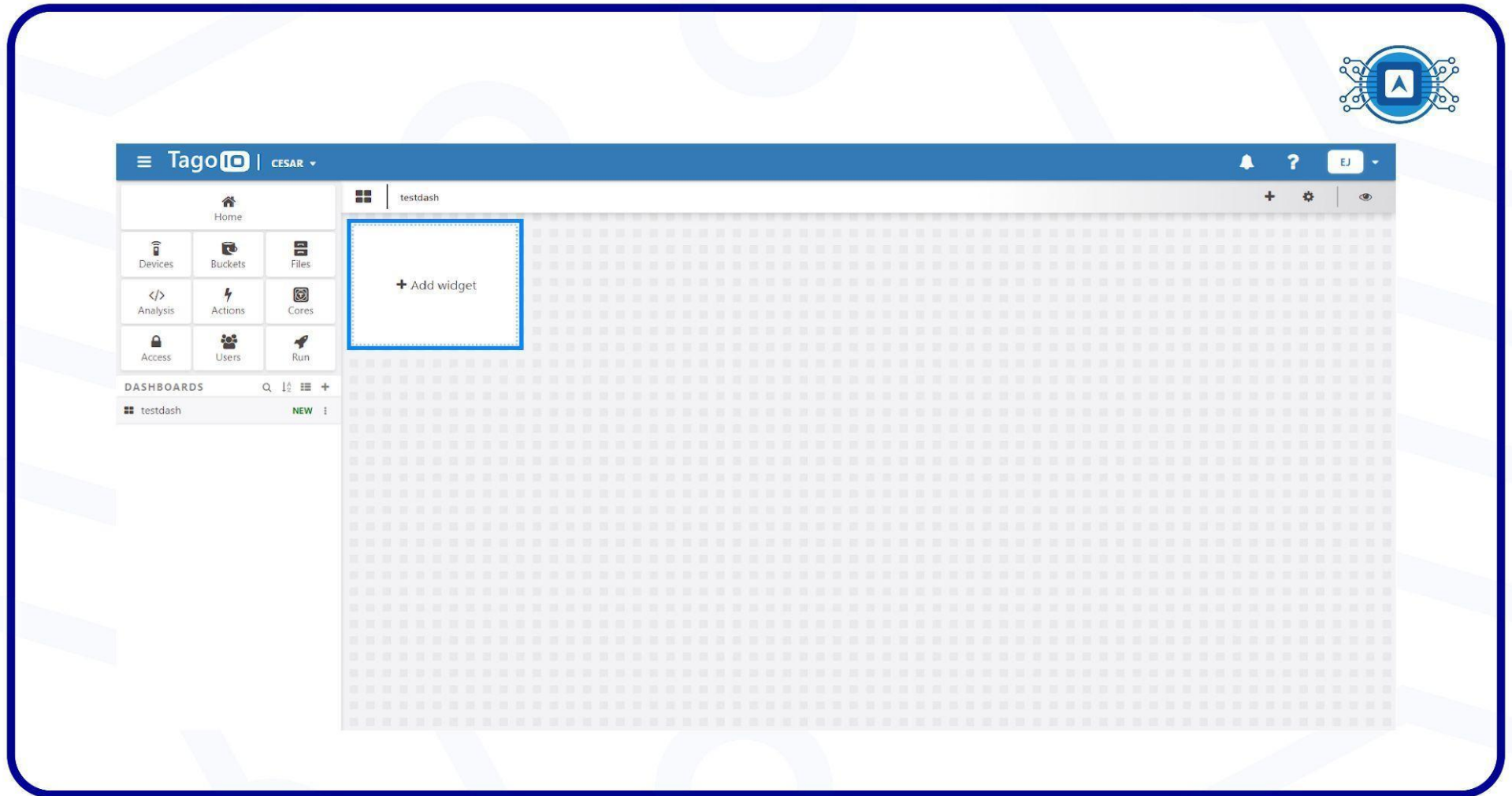


Image 8: Add widget. Source: Screenshot by the author.

Select the “**widget**” type according to the needs of your project, which in this case will be selected the “**Card**” as highlighted in image 9. It will be used as a “**temperature**” indicator.

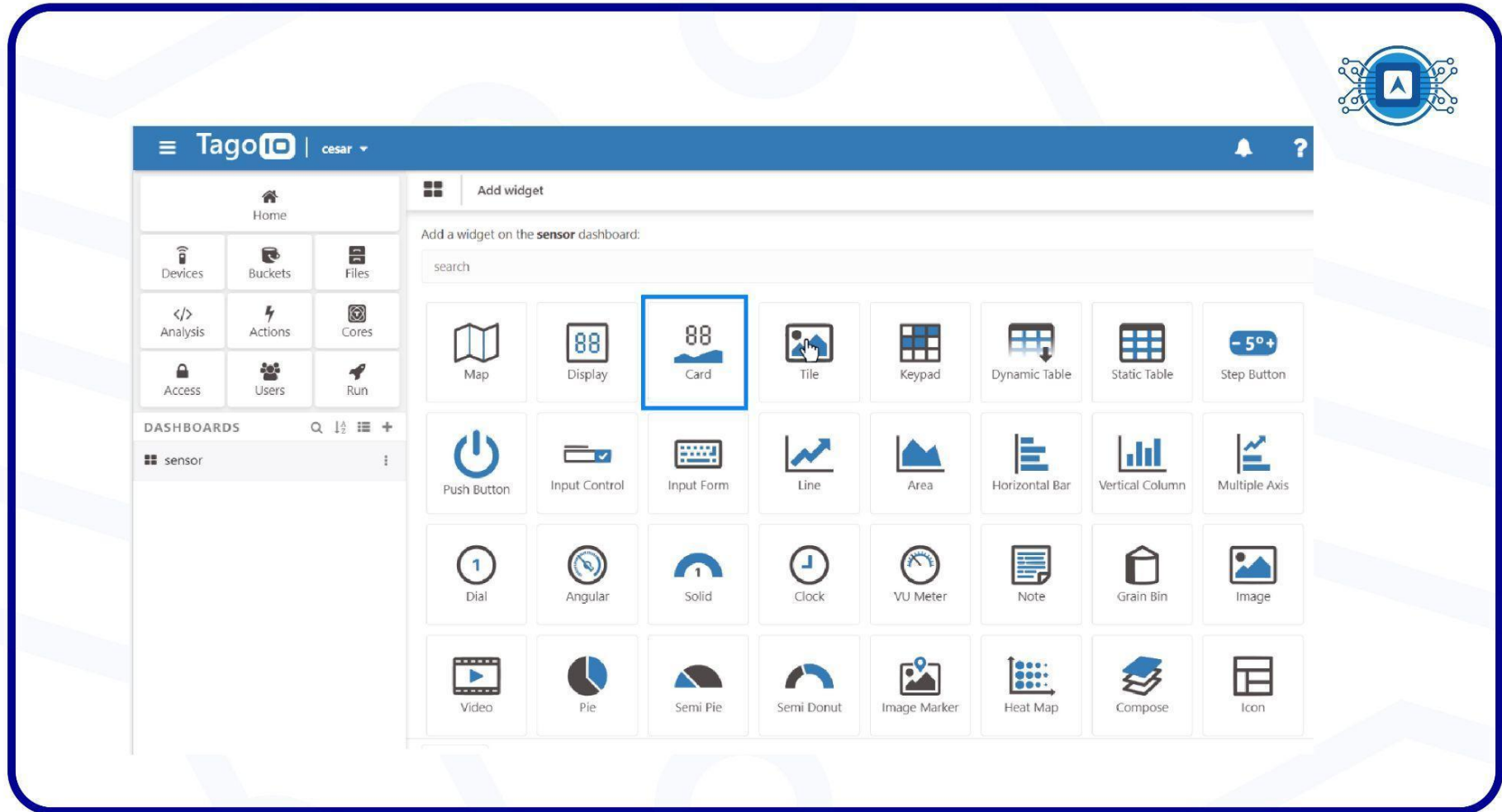


Image 9: Select Widget. Source: Screenshot by the author.

Select the “**(A) Device**” that will fill the data in the widget, name the “**(B) variable**” that will be used and then click “**(C) create**”.

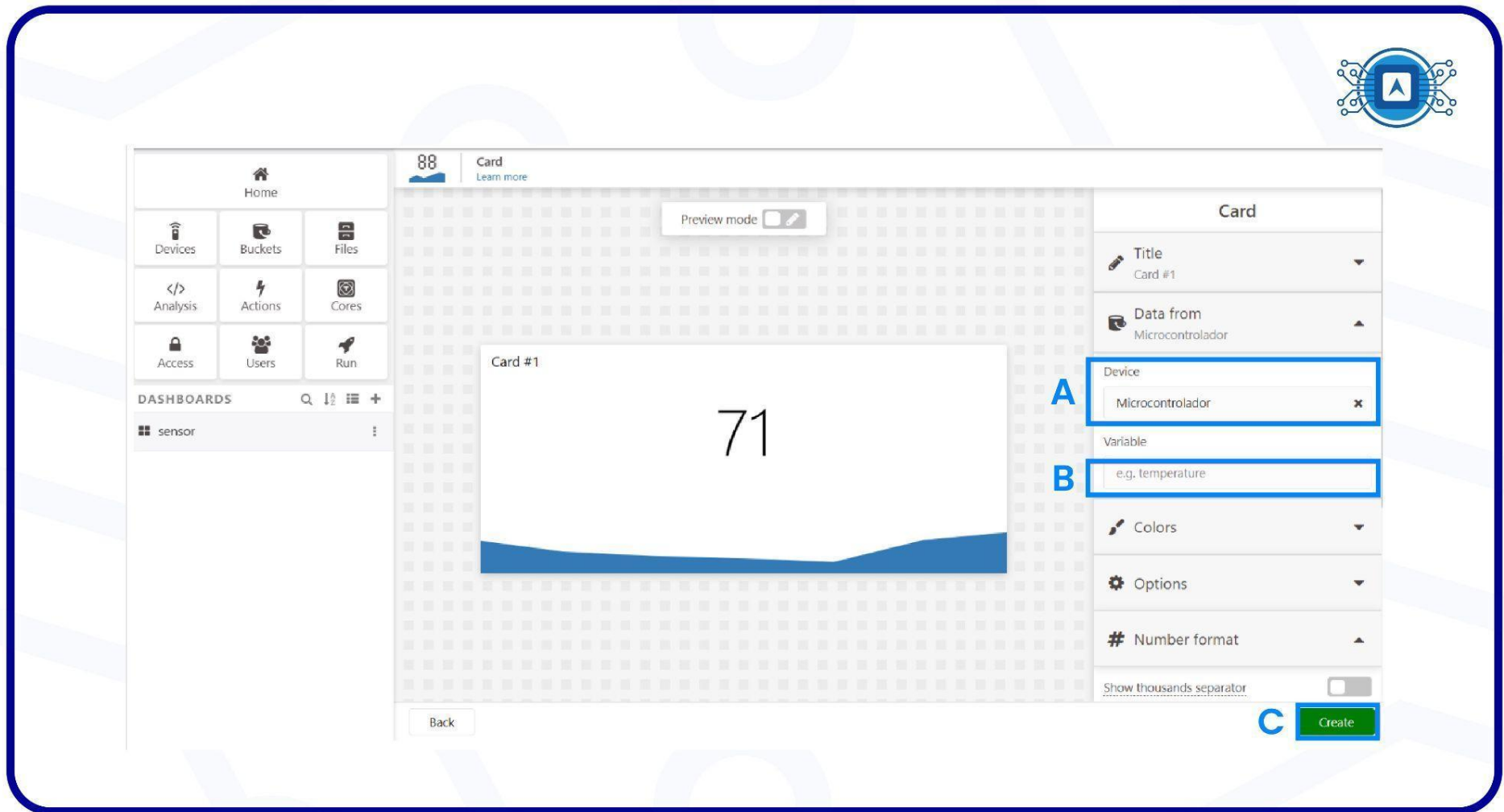


Image 10: Widget Configuration. Source: Screenshot by the author.

The values read by the sensor should appear on the **card** as shown in image 11, which will be updated in real time.

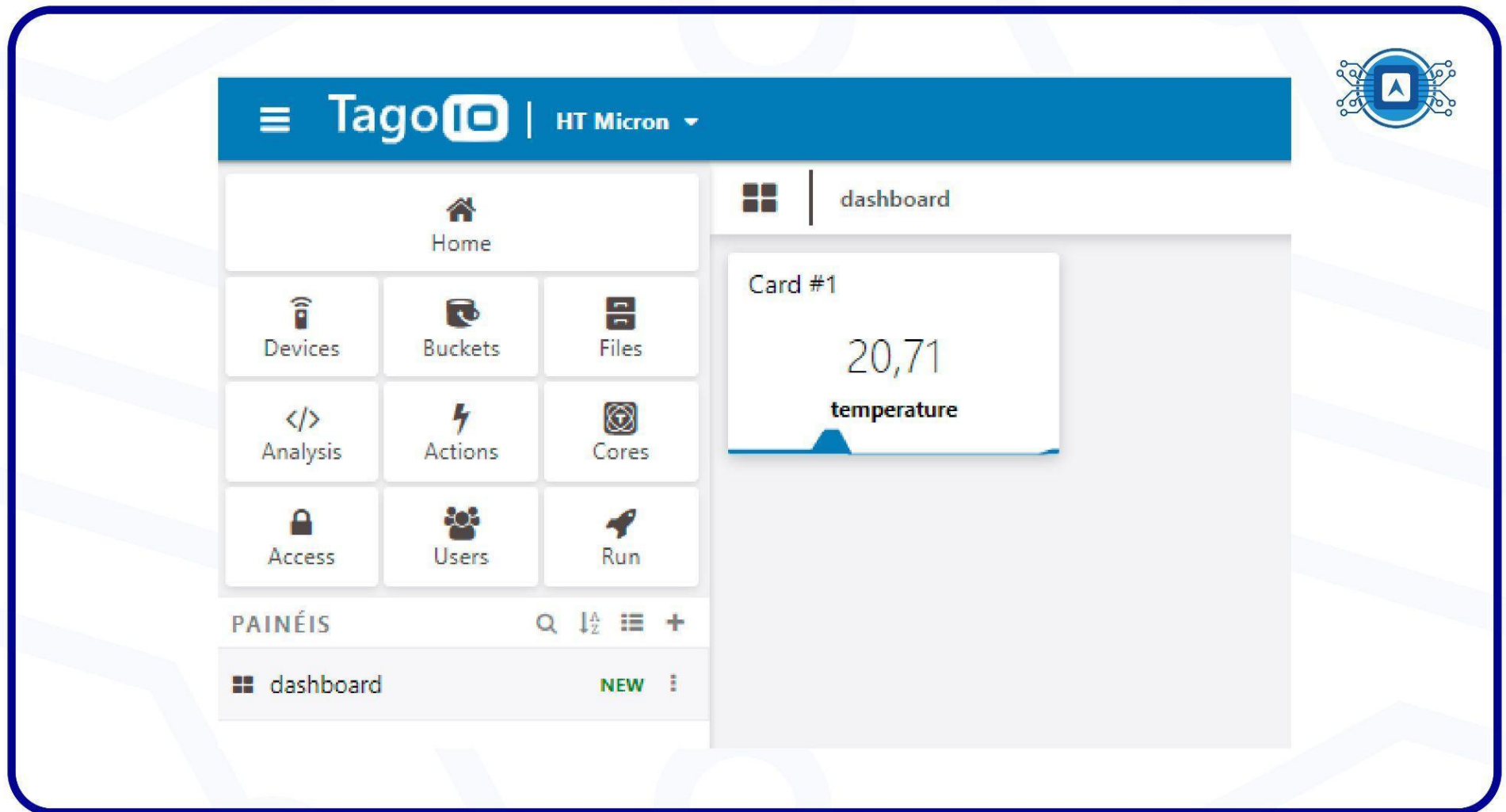


Image 11: Temperature card. Screenshot by the author.

In this tutorial the basics of developing and configuring the interface between cloud backend and dashboard were presented, starting with a practical example with the **HTLRBL32L** microcontroller.

## References

TAGOIO. **Authorization. 2022.** Available at: < <https://help.tago.io/portal/en/kb/articles/218-authorization> >. Accessed on july 28th 2022.