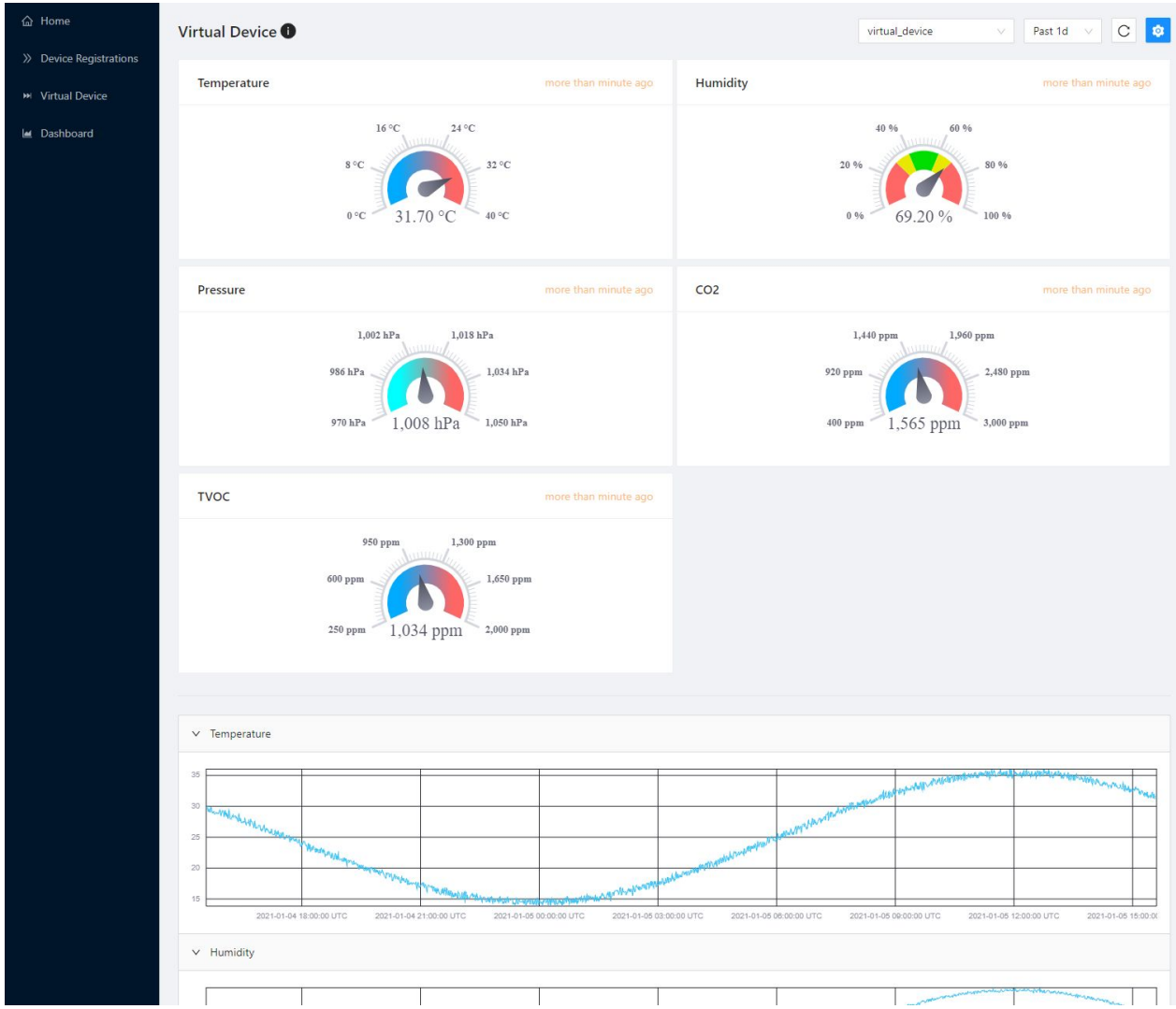
influxdata
Act in Time

IoT Center Installation

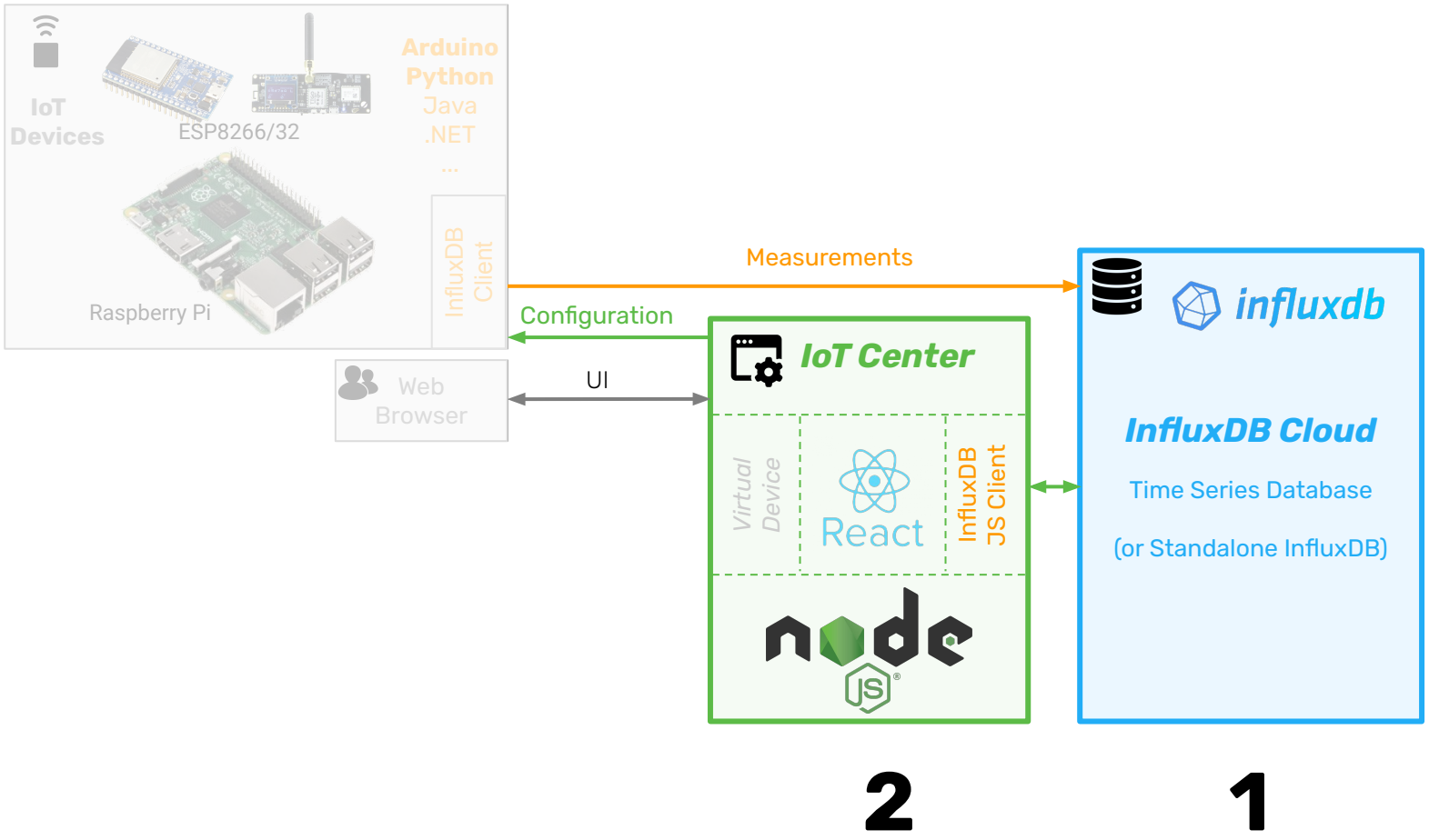
Workshop

Agenda

- InfluxDB Cloud Account
- Prepare environment
  - Install git
  - Install node.js
  - Install yarn
- Get source code from GIT
- Build IoT Center
- Set IoT Center configuration
- Run IoT Center
- Virtual Device Test



IoT Center Installation Approach



Create InfluxDB Cloud Account

Skip this if you already have the InfluxDB account

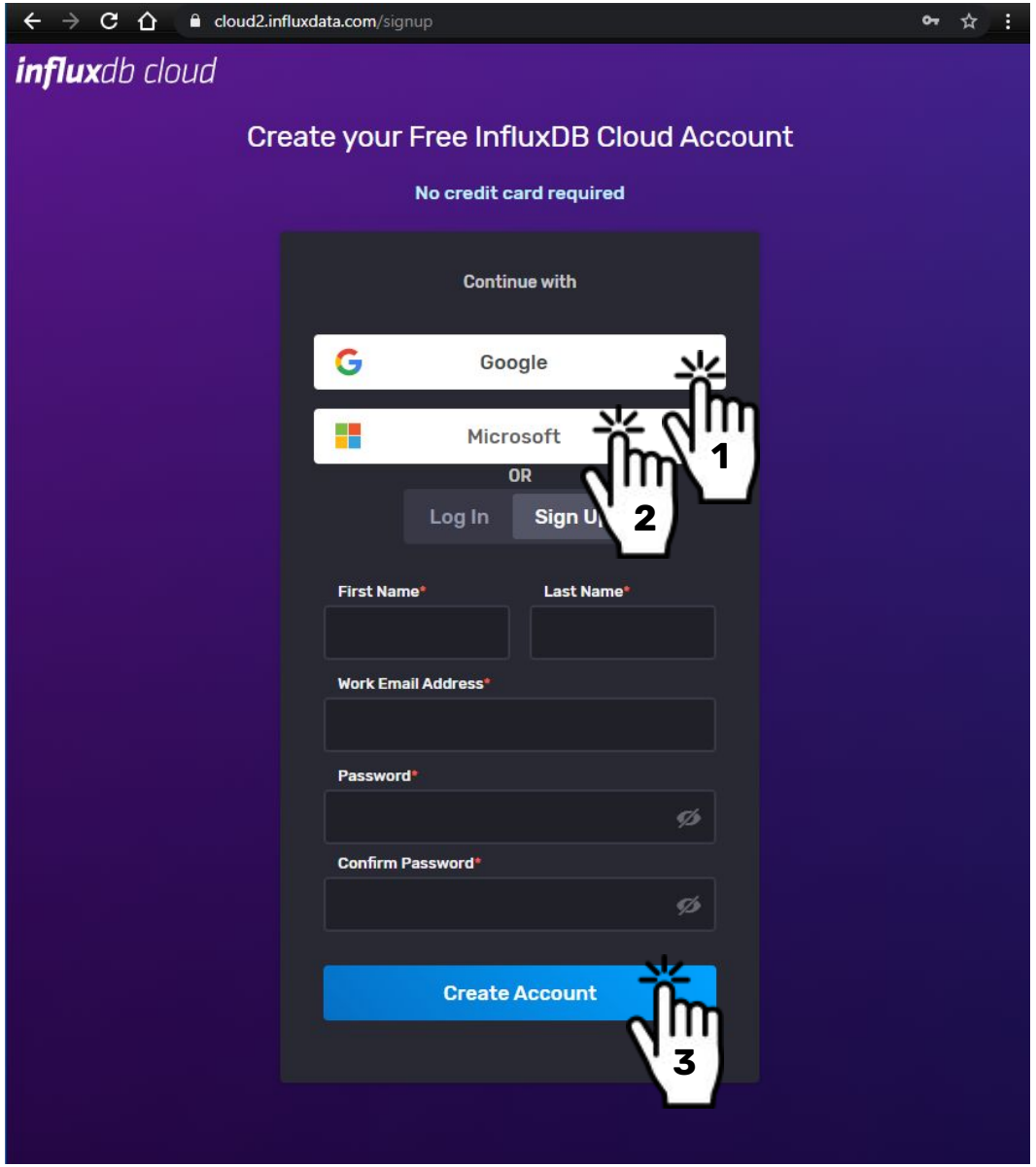
Skip this step if you already have the account

Sign up to Influxdb Cloud

Open Web Browser
https://cloud2.influxdata.com/

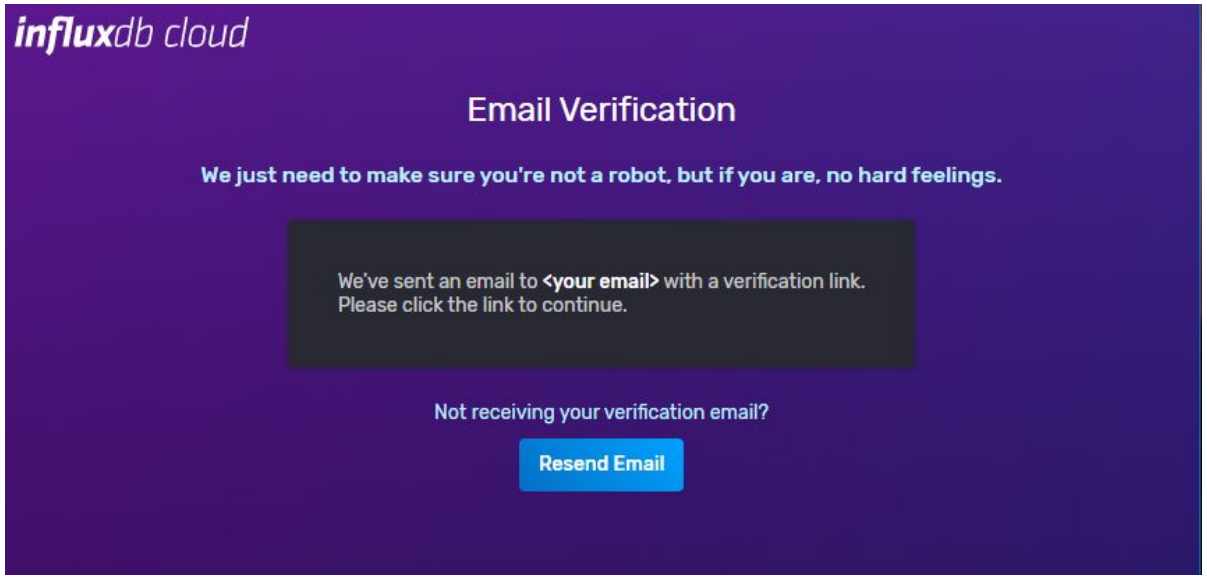
Three options:

1. Register via **Google** email
   - Select right Google account
2. Register via **Microsoft** email
   - Select right Microsoft account
   - Requires *Read profile* rights
3. Create account via **any email**
   - Fill Name, Email, Password
   - Receive email for validation



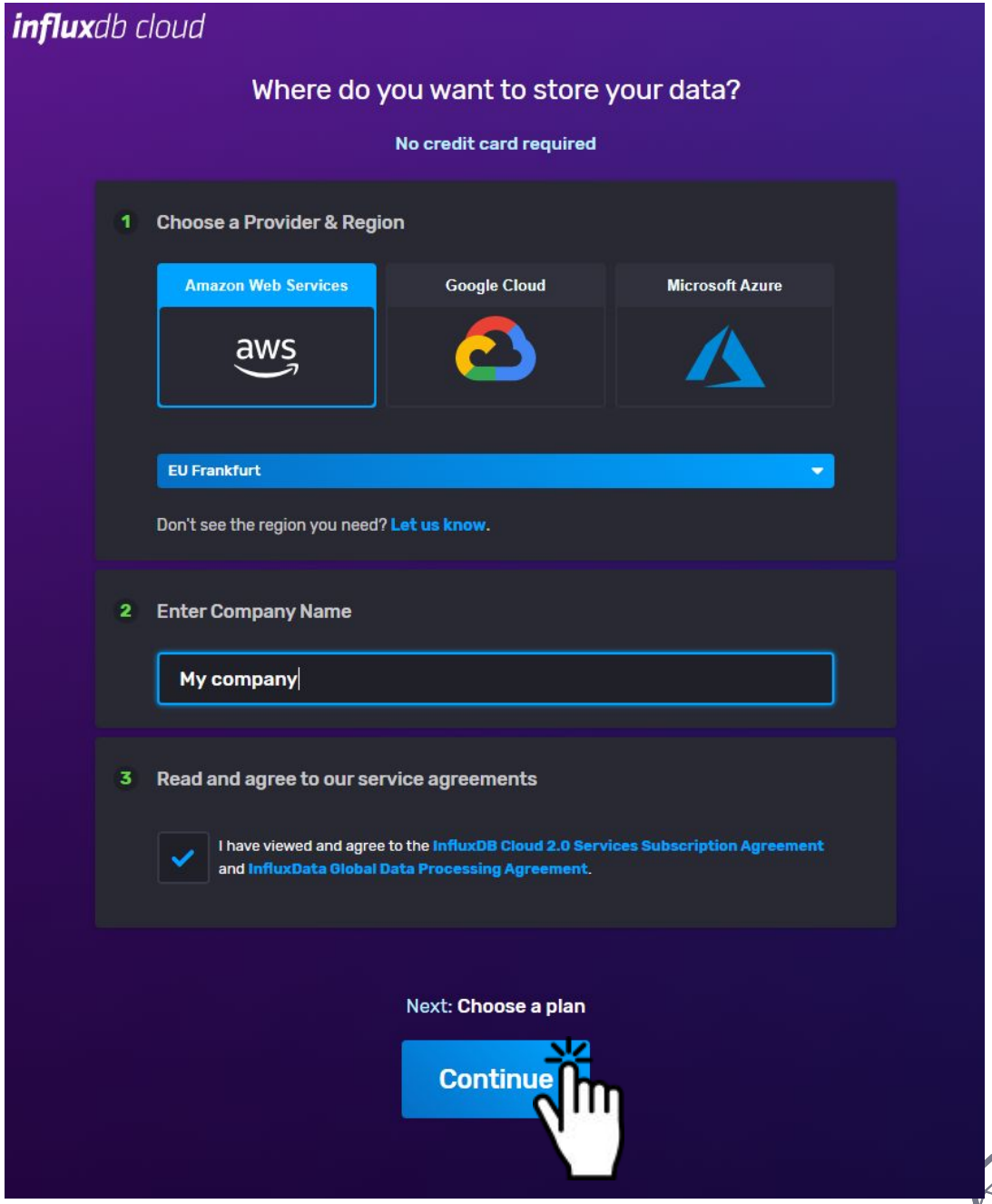
Verification

Only when email option was selected



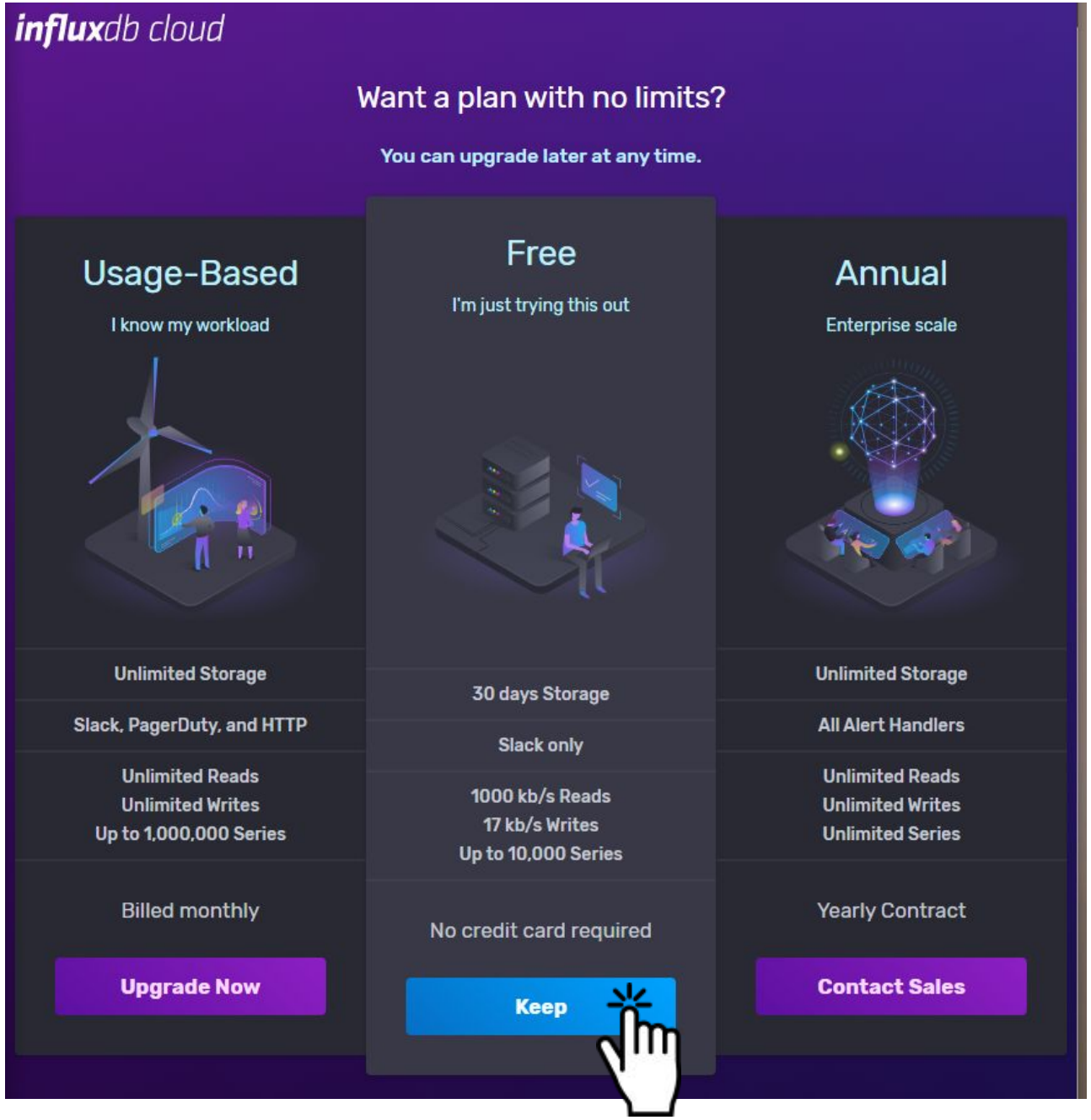
Registration

1. Select any provider
2. Company name
3. Read & check agreement
4. Click continue



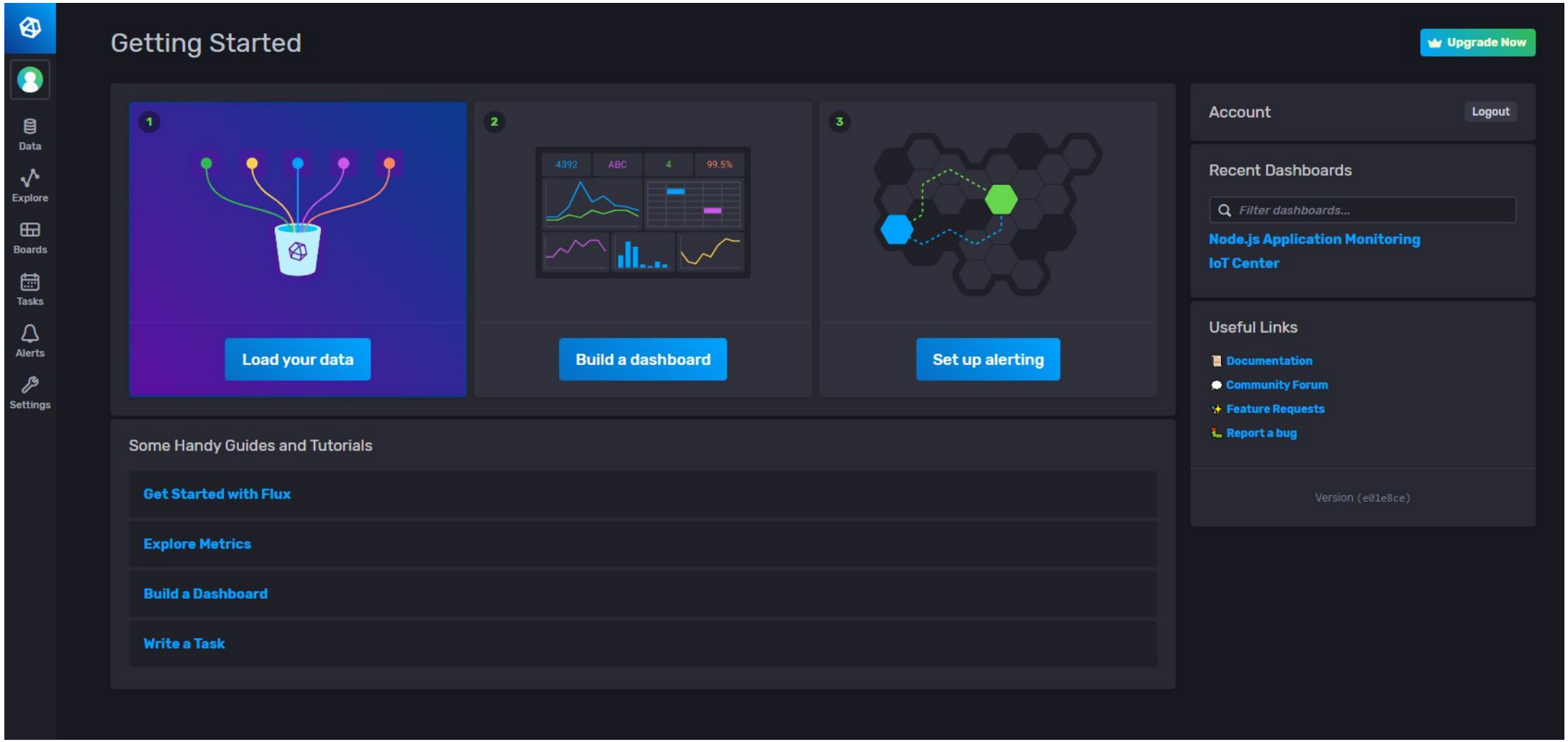
Select plan

- Select **Free** tier (time-unlimited)
- You can upgrade the tier any time



InfluxDB 2 Cloud Account Created

If you already have the InfluxDB account, please login



Generate API Token for IoT Center

Menu

- **Data**

Tab

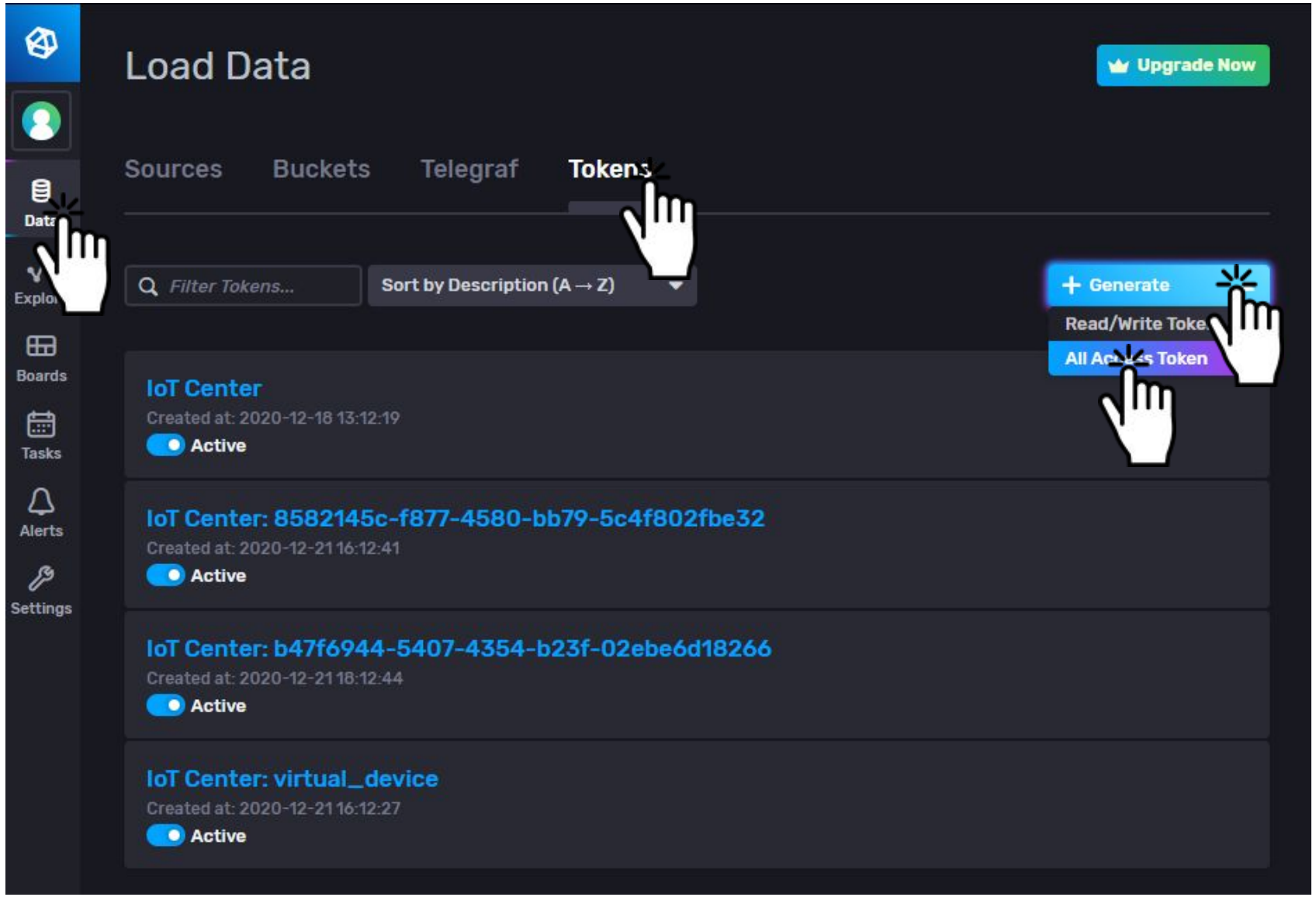
- **Tokens**

Button

- **Generate**

Select

- **All Access Token**



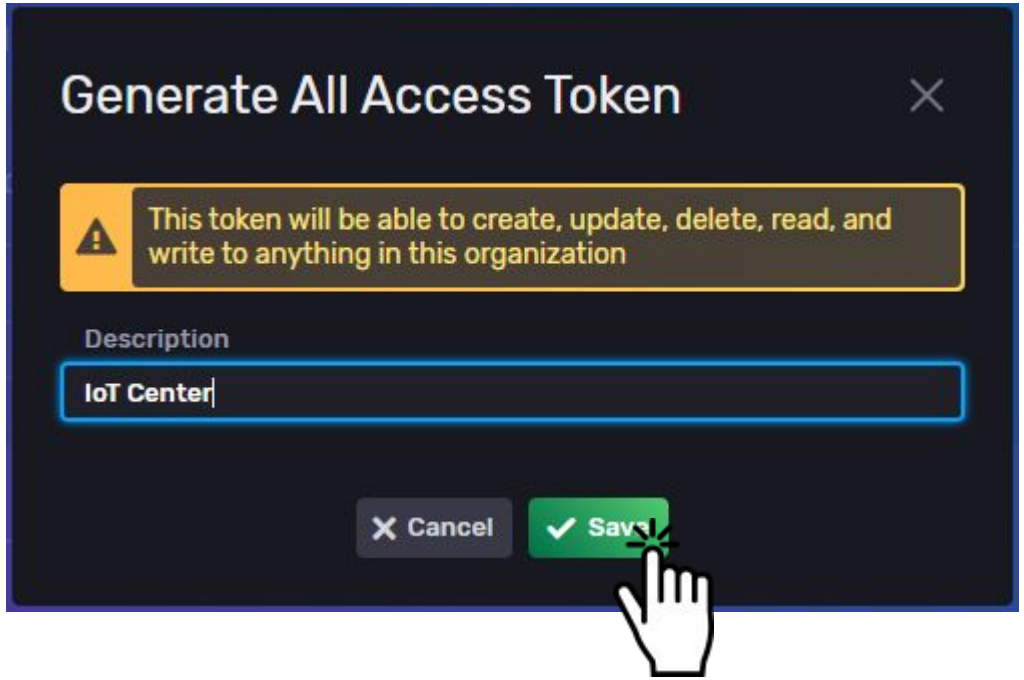
Define API Token Name

Enter Description

- e.g. “IoT Center”

Button

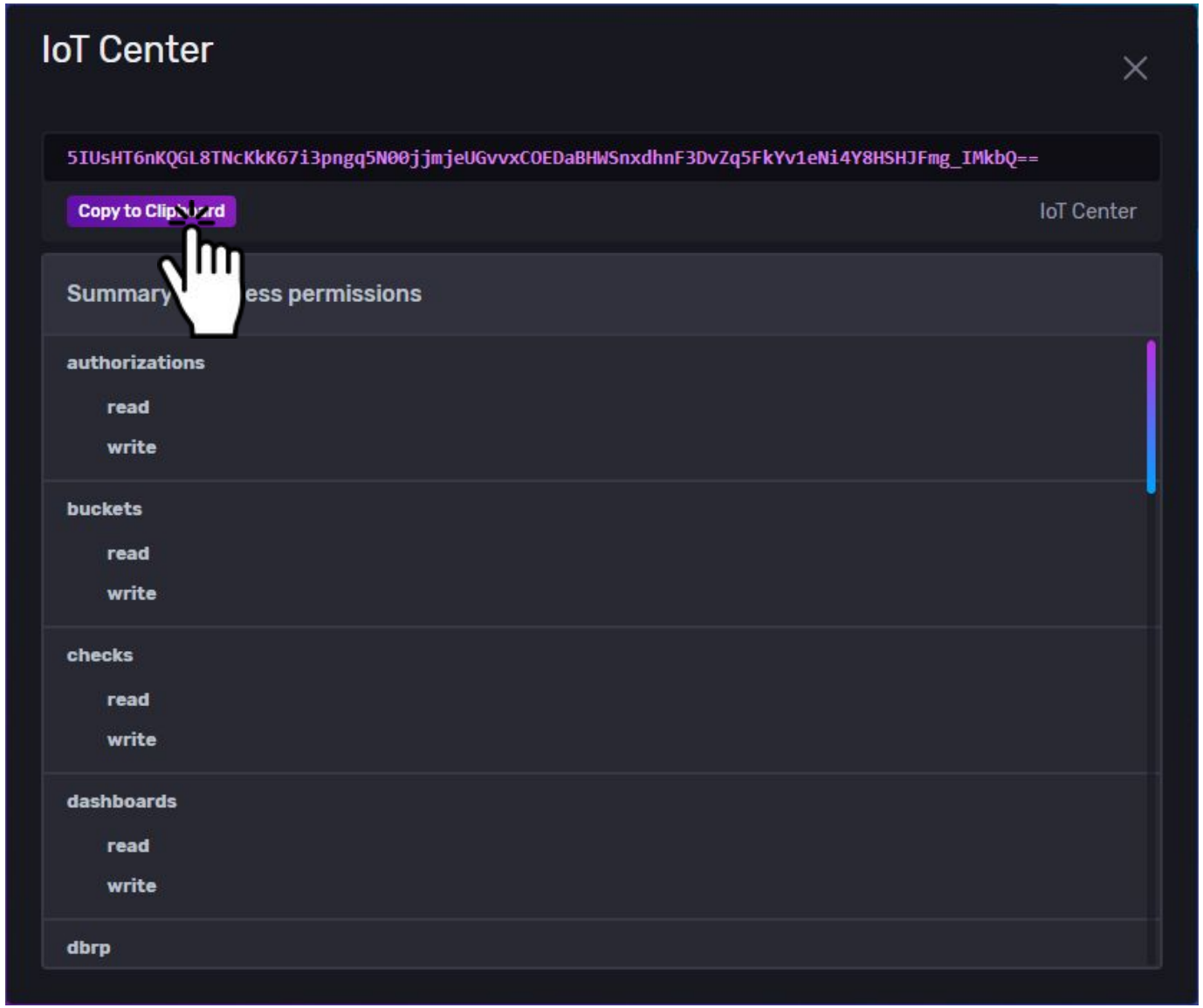
- Save



Get API Token

1. Click on the token name
2. Click button
   - **Copy to clipboard**

Keep this page open - we use the token later



Tools installation for macOS

- Install **brew** package manager tool - see https://brew.sh/
- Run **brew install yarn**

```
$ bin/bash -c "$(curl -fsSL
https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
==> Checking for `sudo` access (which may request your password)...
Password:
==> This script will install:
/usr/local/bin/brew
...
$ brew install yarn
Downloading ...
```

Install git

- All OS (Linux/Windows/macOS)
- Test git

```
$ git --version
git version 2.25.1
```

In case of ***command not found***:

- Follow instructions at https://git-scm.com/downloads

Download IoT Center source code

Run: **git clone https://github.com/bonitoo-io/iot-center-v2**

Slides: **iot-center-v2/slides**

Already exists? Run: **git pull**

```
$ git clone https://github.com/bonitoo-io/iot-center-v2
Cloning into 'iot-center-v2'...
remote: Enumerating objects: 1185, done.
remote: Total 1185 (delta 0), reused 0 (delta 0), pack-reused 1185
Receiving objects: 100% (1404/1404), 1.92 MiB | 1.92 MiB/s, done.
Resolving deltas: 100% (977/977), done.
```


Tools installation for **Linux/macOS** systems

- Move to app directory: **cd iot-center-v2/app/**
- Run **./tools.sh** (installs npm, yarn, node)
- Tools installation requires to enter **password** (uses **sudo**)

```
/iot-center-v2/app$ ./tools.sh
===============
Installing npm...
[sudo] password for mirek:
Reading package lists... Done
Building dependency tree
...
```


Tools installation

- Test **node** and **yarn** tools

```
$ node --version
v12.19.0
```

```
$ yarn --version
1.22.5
```

Required versions:

- node v12.x.x and newer
  https://nodejs.org/en/download/
- yarn x.x.x not 0.xx+git
  https://classic.yarnpkg.com/en/docs/install

Build IoT Center

- Directory: **cd iot-center-v2/app/**
- Run: **yarn install** (takes up to several minutes)

```
/iot-center-v2/app$ yarn install
yarn install v1.22.5
[1/4] Resolving packages…
[2/4] Fetching packages…
[4/4] Building fresh packages…
Done in 140.75s.
```

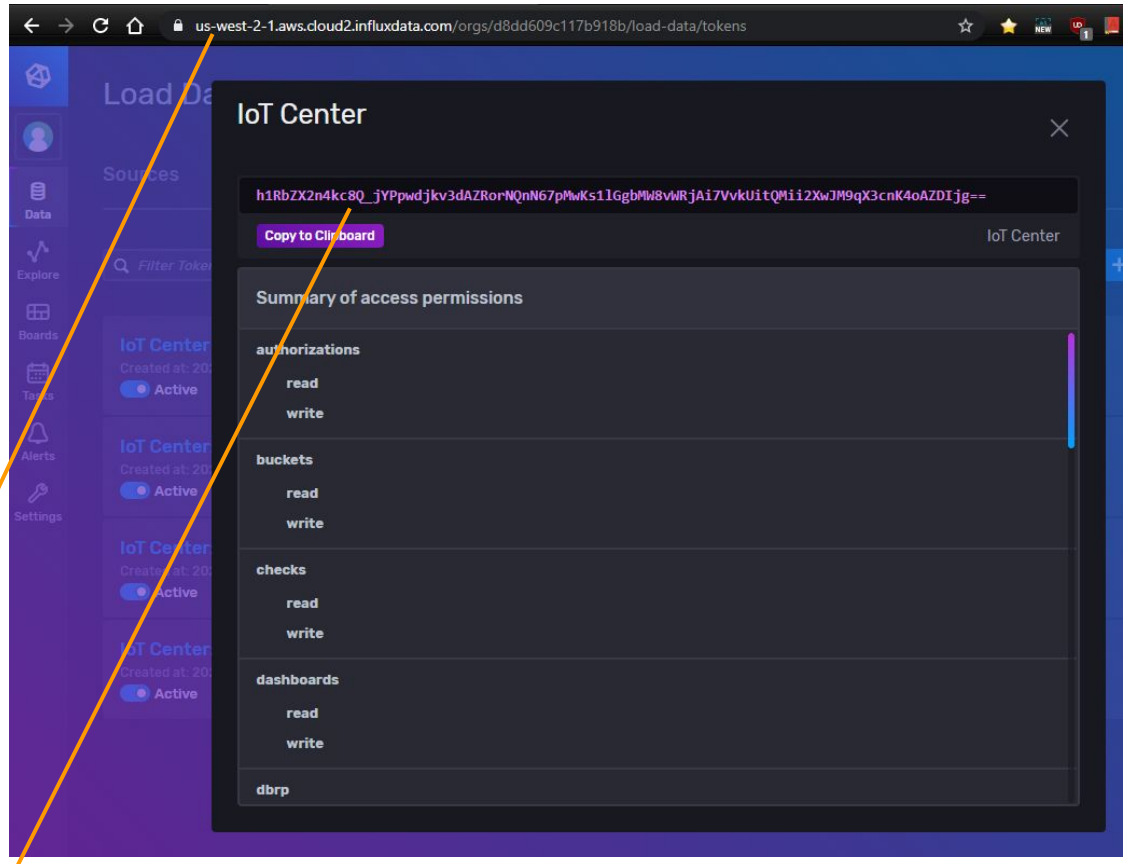
Errors

- *[Errno 2] No such file or directory: 'install'* - **upgrade yarn version**
- *The engine "node" is incompatible. Expected version ">=12.0.0"* - ***upgrade node.js***

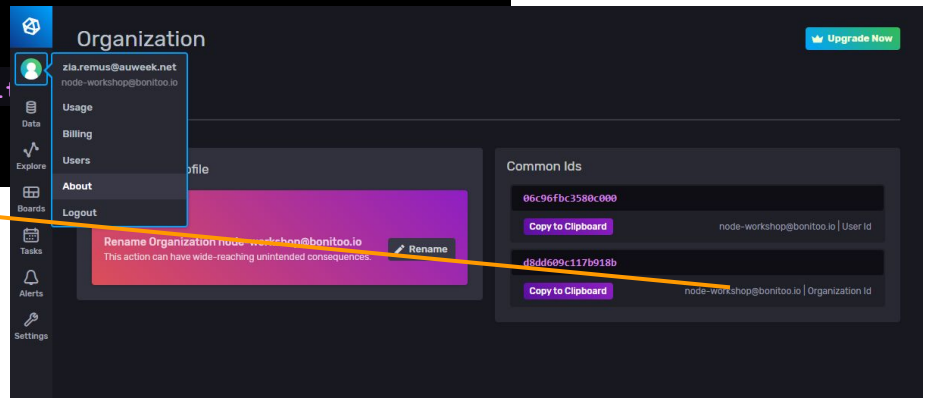
Configure start scripts

Modify files in **iot-center-v2/app** directory

- Windows - open file **dev.bat**
- Linux/macOS - open file **dev.sh**

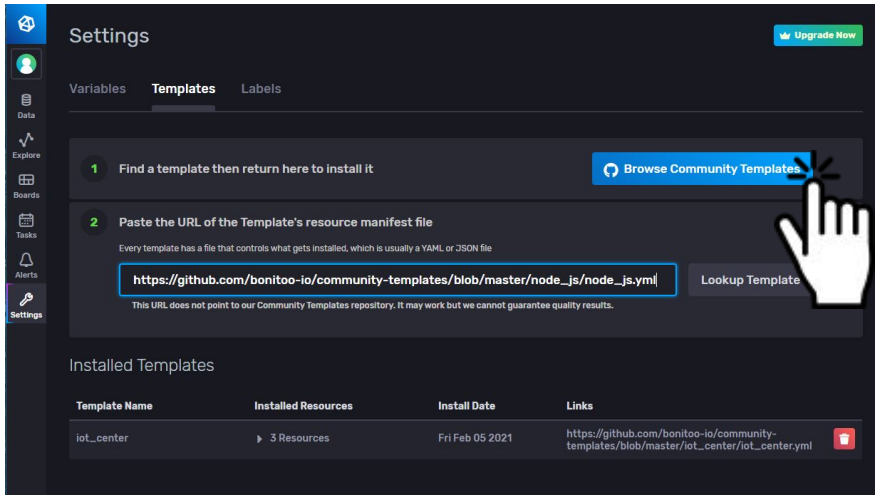


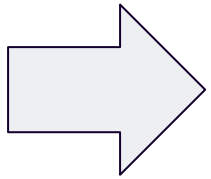

```
SET INFLUX_URL=https://us-west-2-1.aws.cloud2.influxdata.com
SET INFLUX_TOKEN=h1RbZX2n4kc8Q_jYPpwdjkv3dAZRorNQnN67pMwKs1lGgbMW8vWRjAi7VvkUi
SET INFLUX_ORG=node-workshop@bonitoo.io
```



Monitoring Template Installation

Show & contribute to InfluxDB Templates





InfluxDB Community Templates

verify-all-templates passing | Slack join chat

InfluxDB 2.0 introduces InfluxDB templates—prepackaged InfluxDB configurations that contain everything from dashboards and Telegraf configurations to notifications and alerts in a single manifest file. Use InfluxDB templates to get a fresh instance of InfluxDB set up quickly, create reusable templates for common setups, back up your own deployment setup, and share your templates with the community.

In true open source spirit, you can update InfluxDB templates with common use cases and share with other InfluxDB users, so they can get started faster, use known configurations, and contribute improvements to templates that benefit everyone in the community.

The purpose of this repository is to promote the creation, sharing, and reuse of templates among the InfluxDB community. Anybody can submit new templates or improvements upon existing templates and use these templates in their own InfluxDB instances.

Templates

Start by reading how to use a template, then check each template's individual instructions for further setup and customization options.

Template	Description	Author
Air Quality	Retrieve air quality statistics from the US EPA website	Kristina Robinson
Algorithmia	Monitor machine learning model performance metrics	@koverholt
Apex Legends	Collect player metrics from the game Apex Legends	@b3vis
AWS Cloudwatch Monitoring	Monitor AWS EC2 and ELB	bonitoo.io
Ceph Cluster	Monitor your Ceph Cluster with Prometheus metrics	@bonitoo.io
Counter Strike: Global Offensive	Get stats about your game. Kills, Deaths and stats by weapon.	Ignacio Van Droogenbroeck
Covid-19 in South America	Current data and graphs covering Covid-19 cases and deaths in South America	Ignacio Van Droogenbroeck
Cribl LogStream	Monitor and visualize your metric data from Cribl LogStream.	Clint Sharp
Currency Exchange Rates	Visualize and analyze currency exchange rates using Quandl.	Wojciech Kocjan
DigitalOcean Billing	Get your balance, month consumption and month to date balance	Ignacio Van

Install Dashboard 1/2

Left Menu

- Settings

Tab

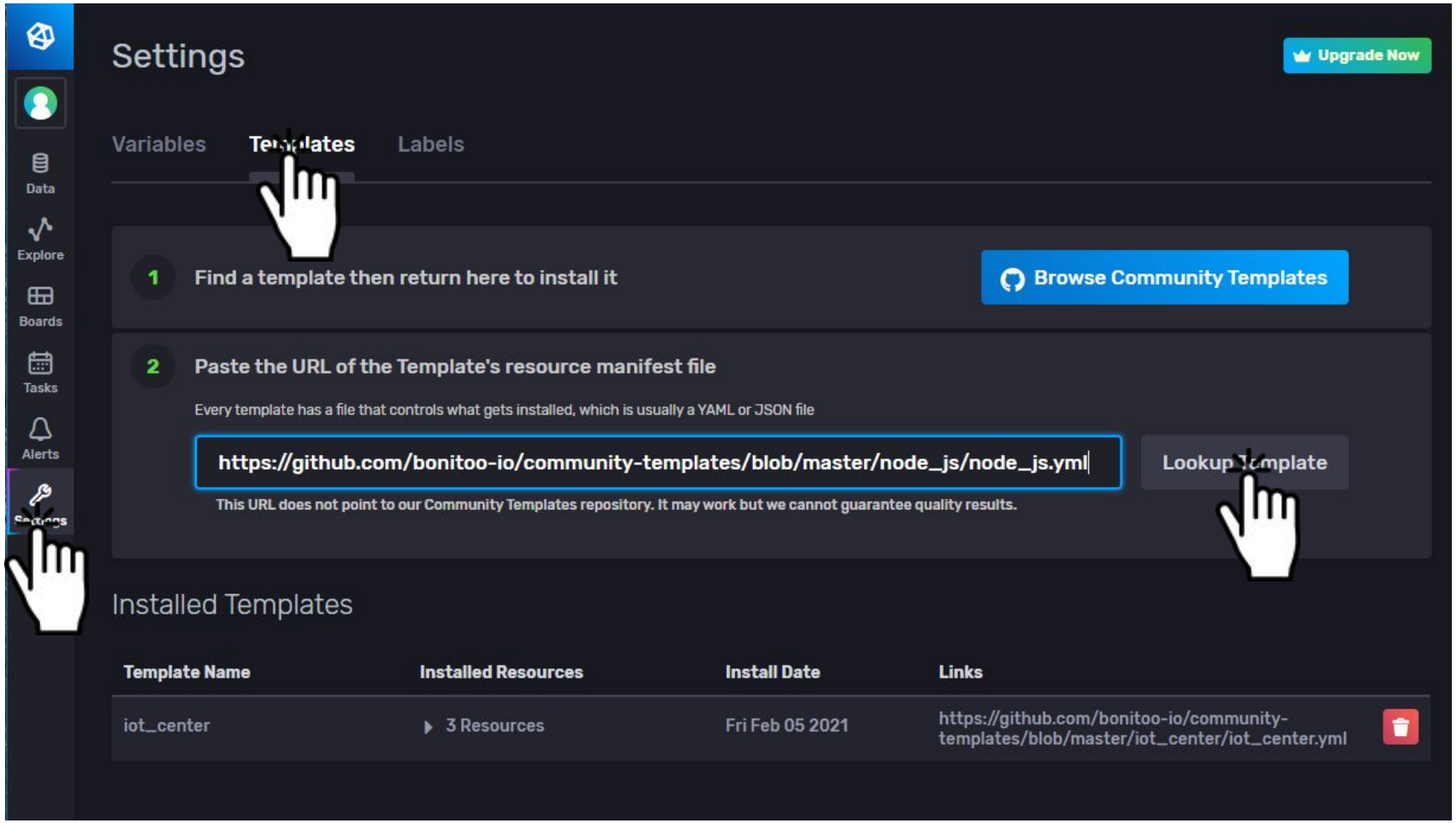
- Templates

Paste the URL

- URL below

Button

- Lookup template

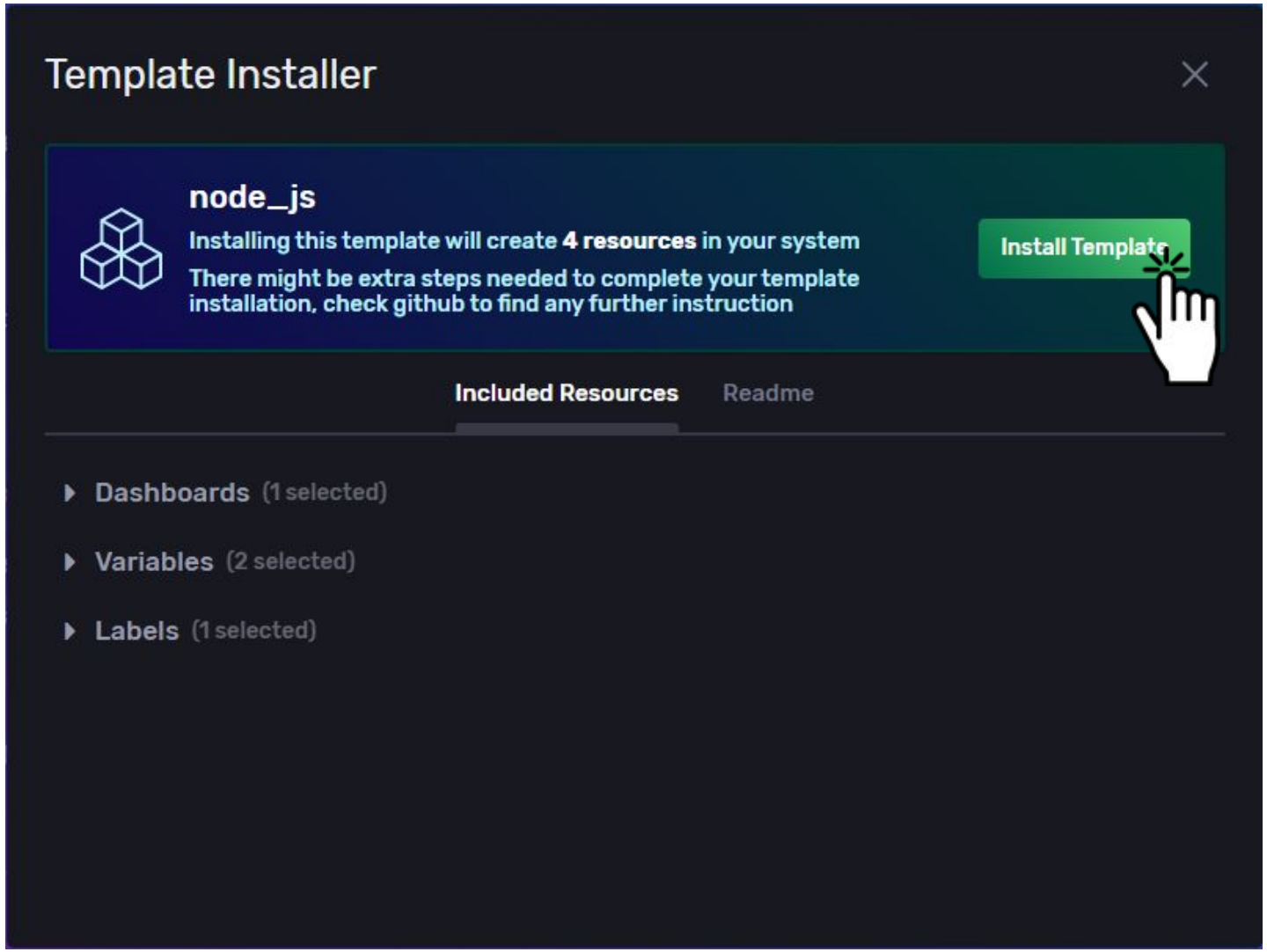


https://github.com/influxdata/community-templates/blob/master/node_js/node_js.yml

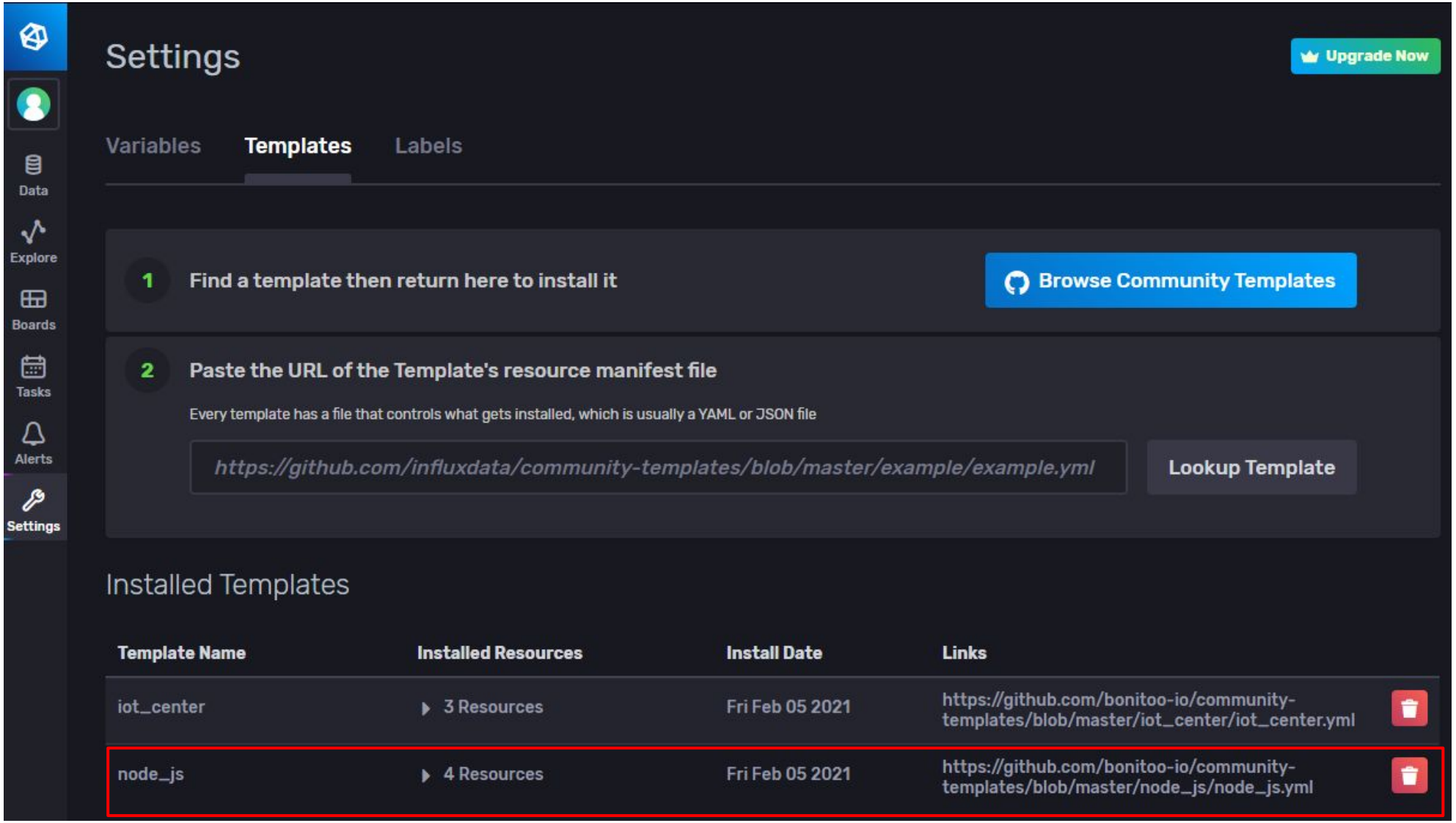
Confirm imported template

Button

- Install Template



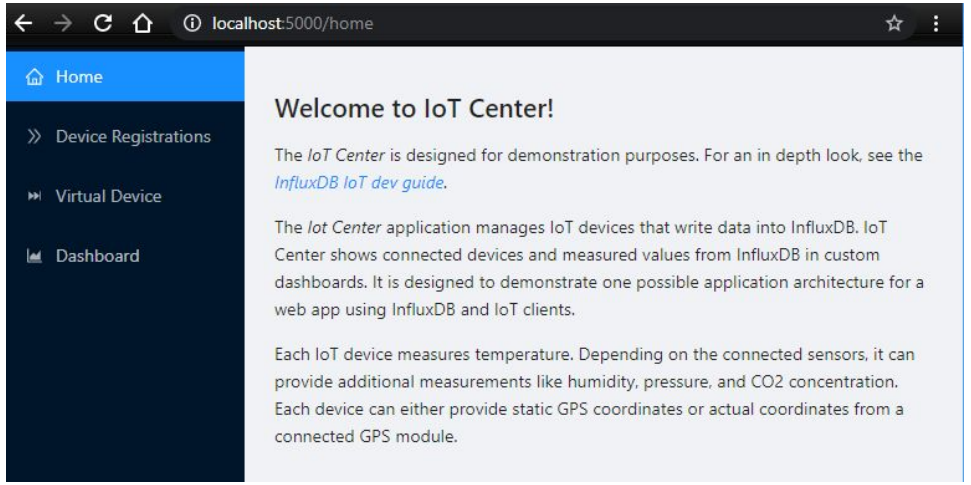
Imported Template



Start IoT Center

Start IoT Center

- Execute
  - **dev.bat** (Windows)
  - **./dev.sh** (Linux/macOS)




```
./dev.sh
yarn run v1.22.5
cd server && yarn start
node index.js
Enable proxy from /influx/* to https://us-west-2-1.aws.cloud2.influxdata.com/*
Bucket 'iot_center' exists.
INFLUX_URL=https://us-west-2-1.aws.cloud2.influxdata.com
INFLUX_TOKEN=***
INFLUX_ORG=node-workshop@bonitoo.io
INFLUX_BUCKET=iot_center
Listening on http://localhost:5000
```

- Open Web browser: http://localhost:3000

Keep this script running - we will use it later

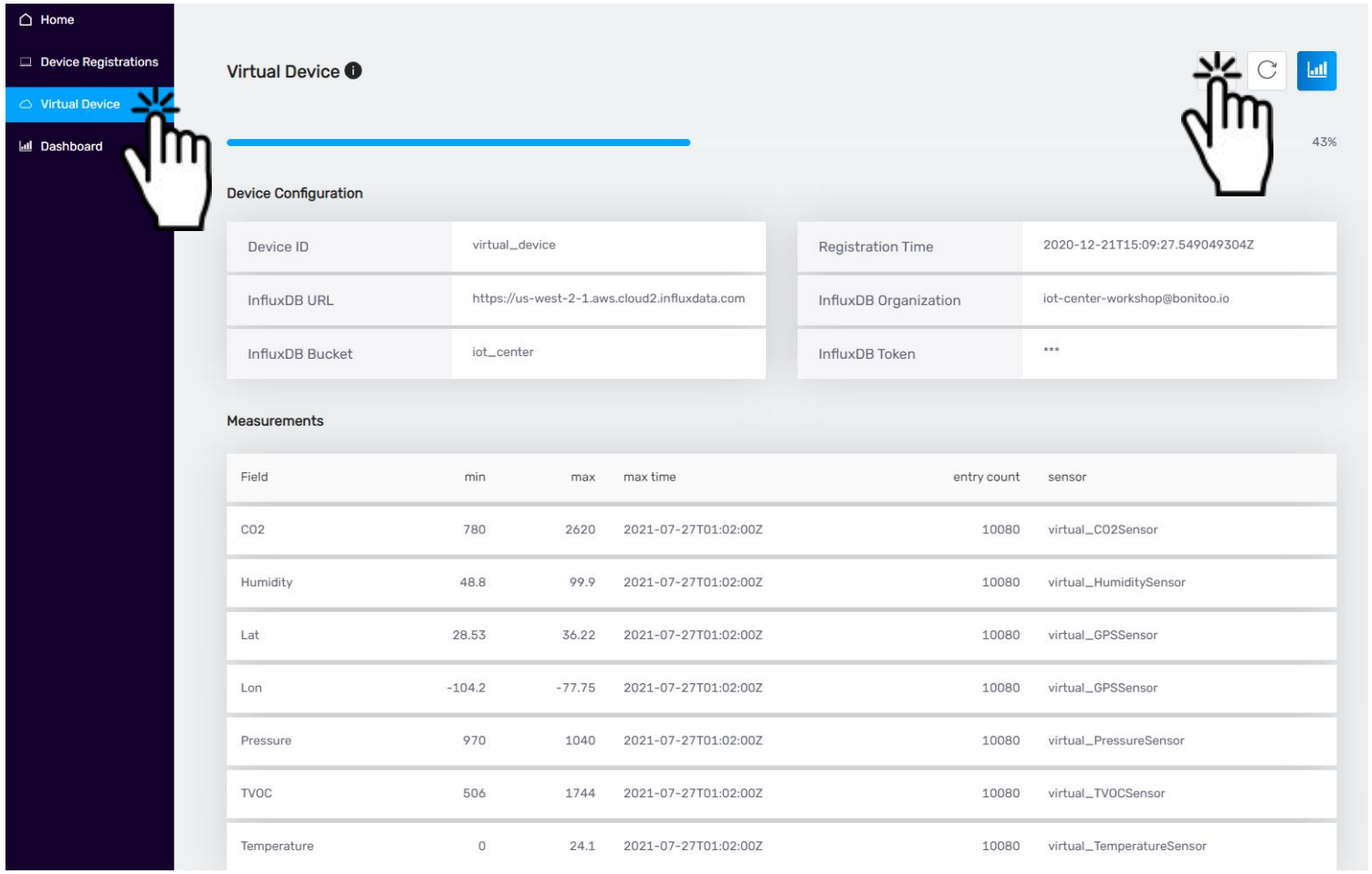
Virtual Device - Generate demo data

Left menu

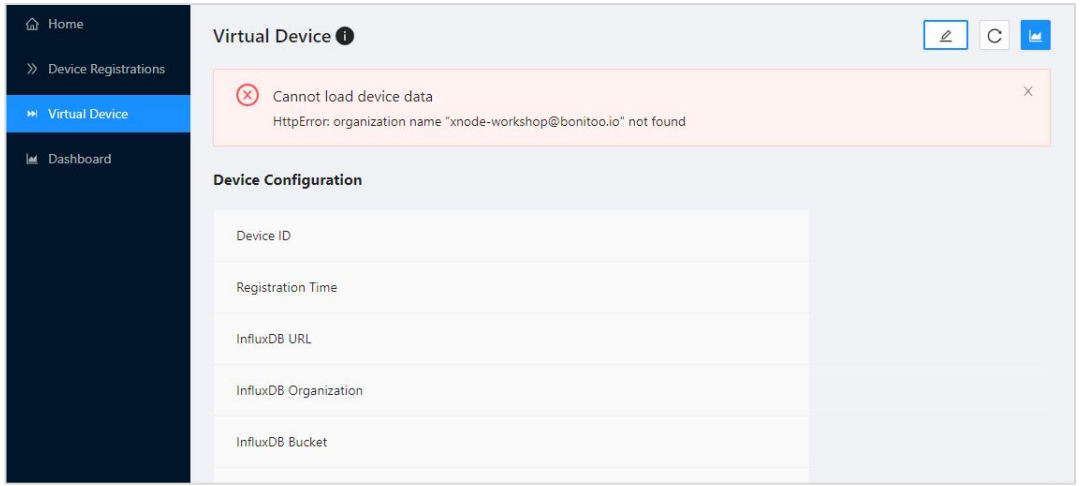
- **Virtual Device**

Top screen

- **Button** with pencil



Issues?



Errors

Error: 500 Error: connect ECONNREFUSED 127.0.0.1:8086

- fix **dev.bat/dev.sh** - you probably didn't save the file

HttpError: organization name "*xnode-workshop@bonitoo.io*" not found

- fix **INFLUX_ORG** - wrong organization name

Error: Unsupported protocol "null in URL: "*us-west-2-1.aws.cloud2.influxdata.com*"

- fix **INFLUX_URL** - add https://

Error: 500 Error: getaddrinfo ENOTFOUND xus-west-2-1.aws.cloud2.influxdata.com

- fix **INFLUX_URL** - wrong address

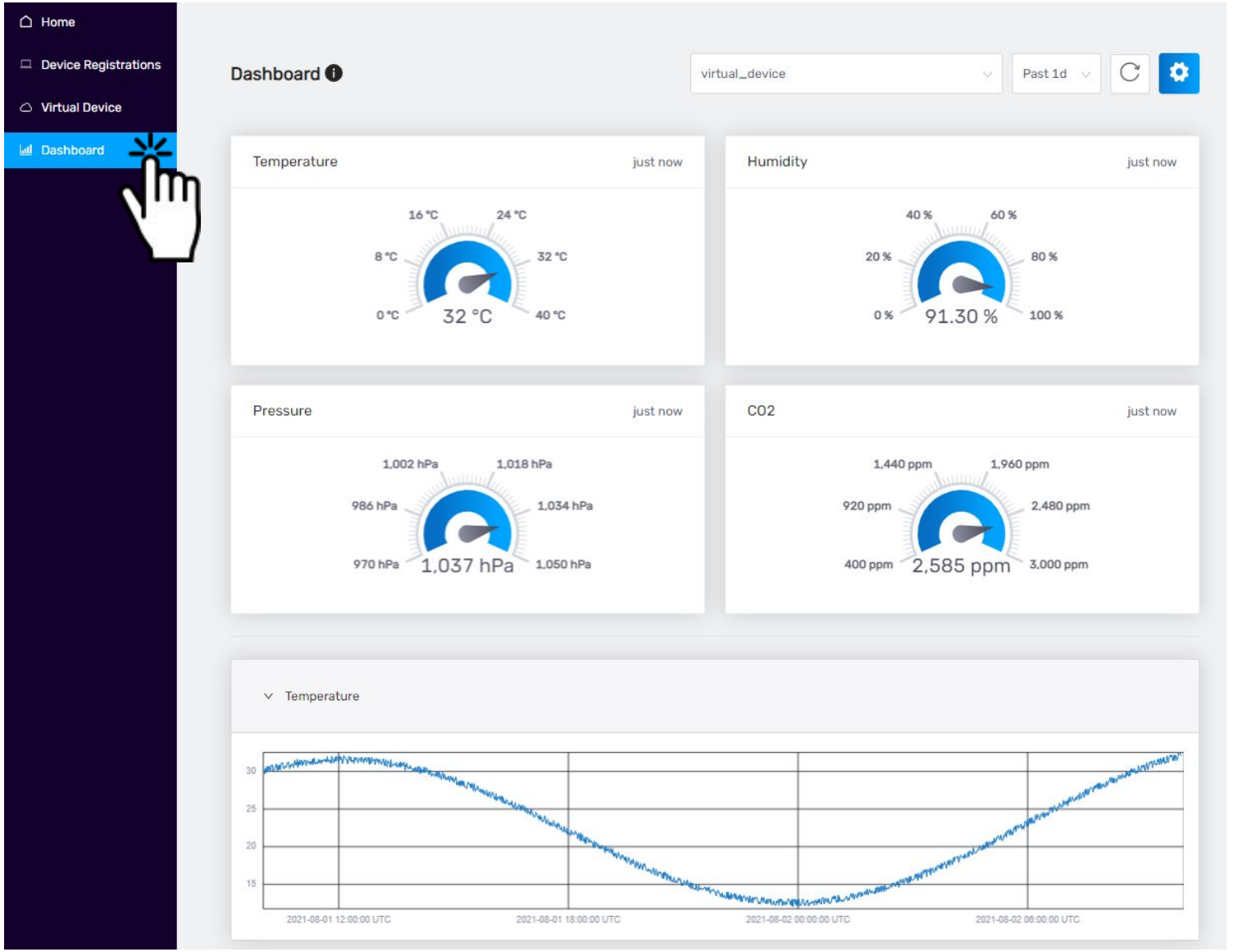
Error: 500 Error: 401 Unauthorized : {"code":"unauthorized","message":"unauthorized access"}

- fix **INFLUX_TOKEN** - invalid credentials

Test Demo Data

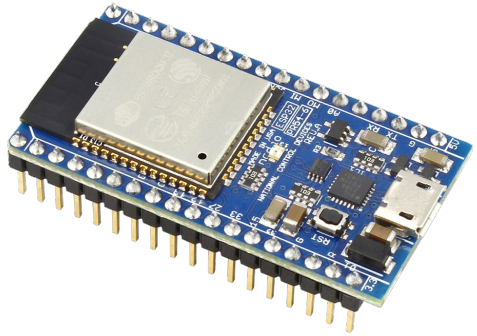
Left Menu

- Click **Dashboard**

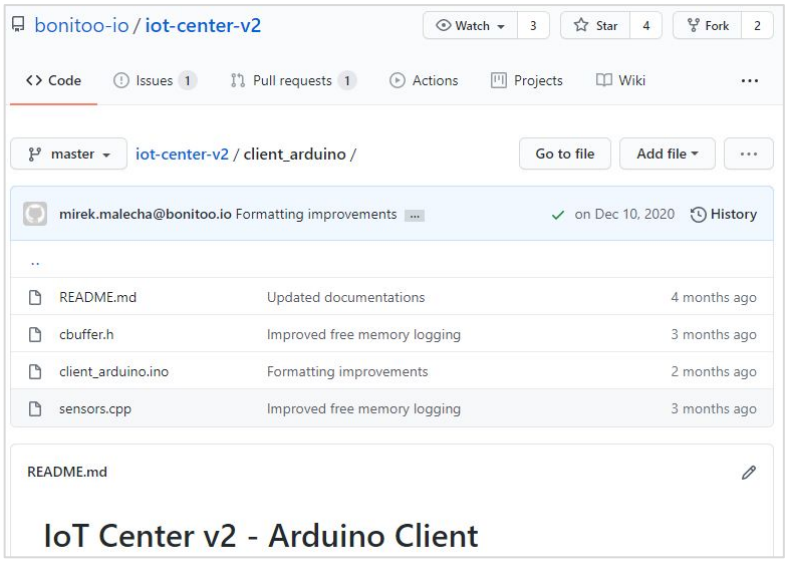


IoT Platforms source code (temperature sensor required)

ESP8266 and ESP32 devices
Arduino

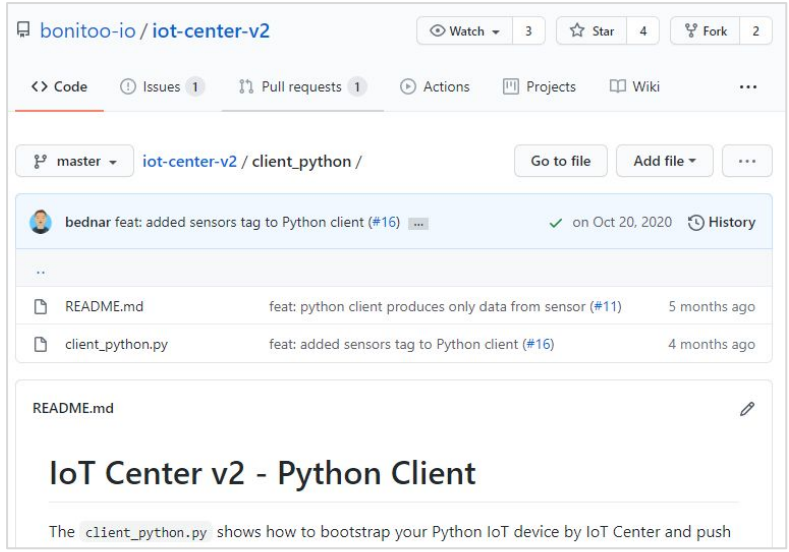


https://github.com/bonitoo-io/iot-center-v2/tree/master/client_arduino



Raspberry Pi
Python

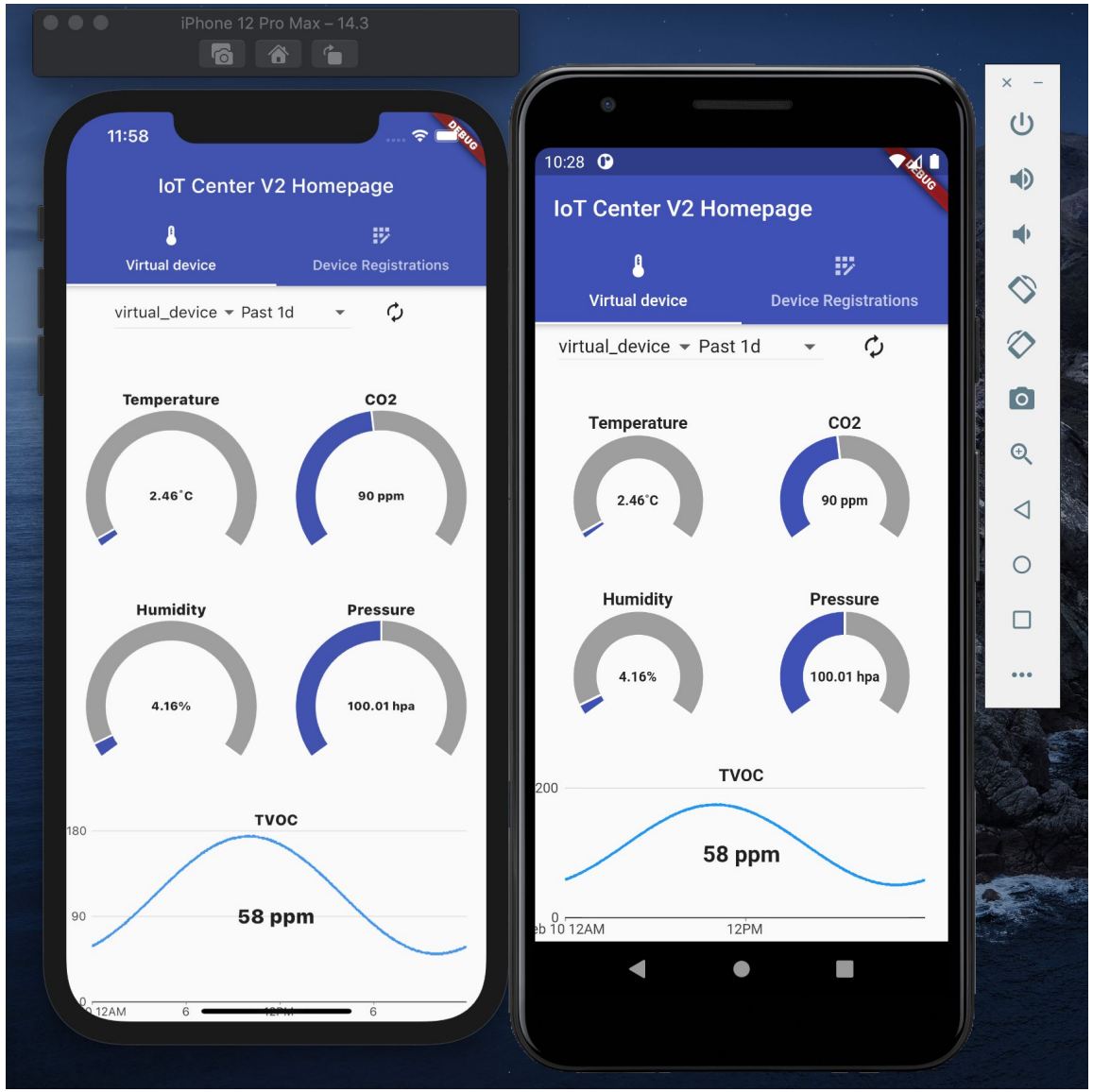
https://github.com/bonitoo-io/iot-center-v2/tree/master/client_python



Mobile client - Flutter

Using Dart InfluxDB Library

https://github.com/influxdata/iot-center-flutter



Break - 5 minutes

Errors

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- fix **dev.bat/dev.sh** - you probably didn't save the file

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Error: Unsupported protocol "null in URL: "*us-west-2-1.aws.cloud2.influxdata.com*"

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Error: 500 Error: getaddrinfo ENOTFOUND xus-west-2-1.aws.cloud2.influxdata.com

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