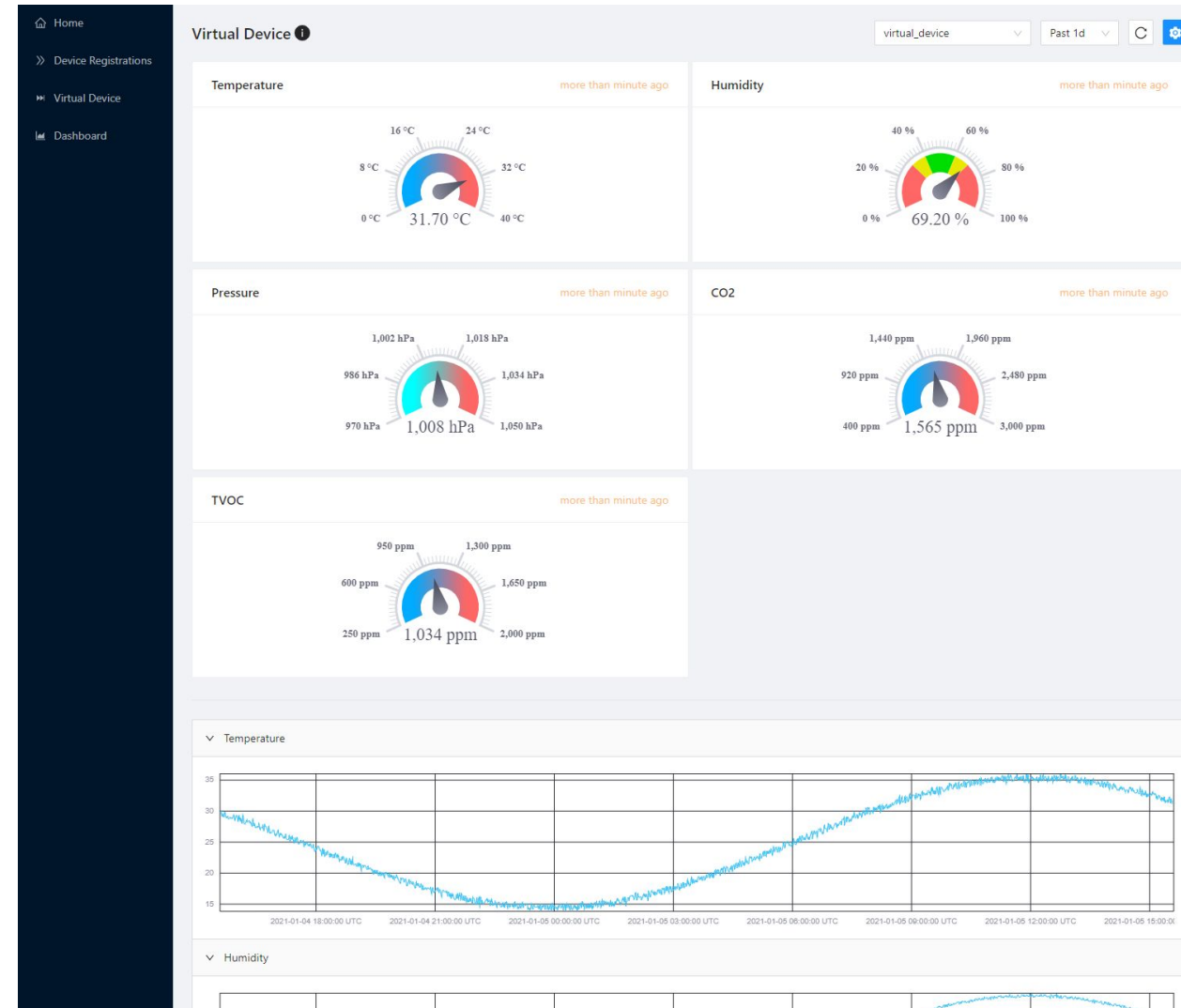**influxdata**

Act in Time

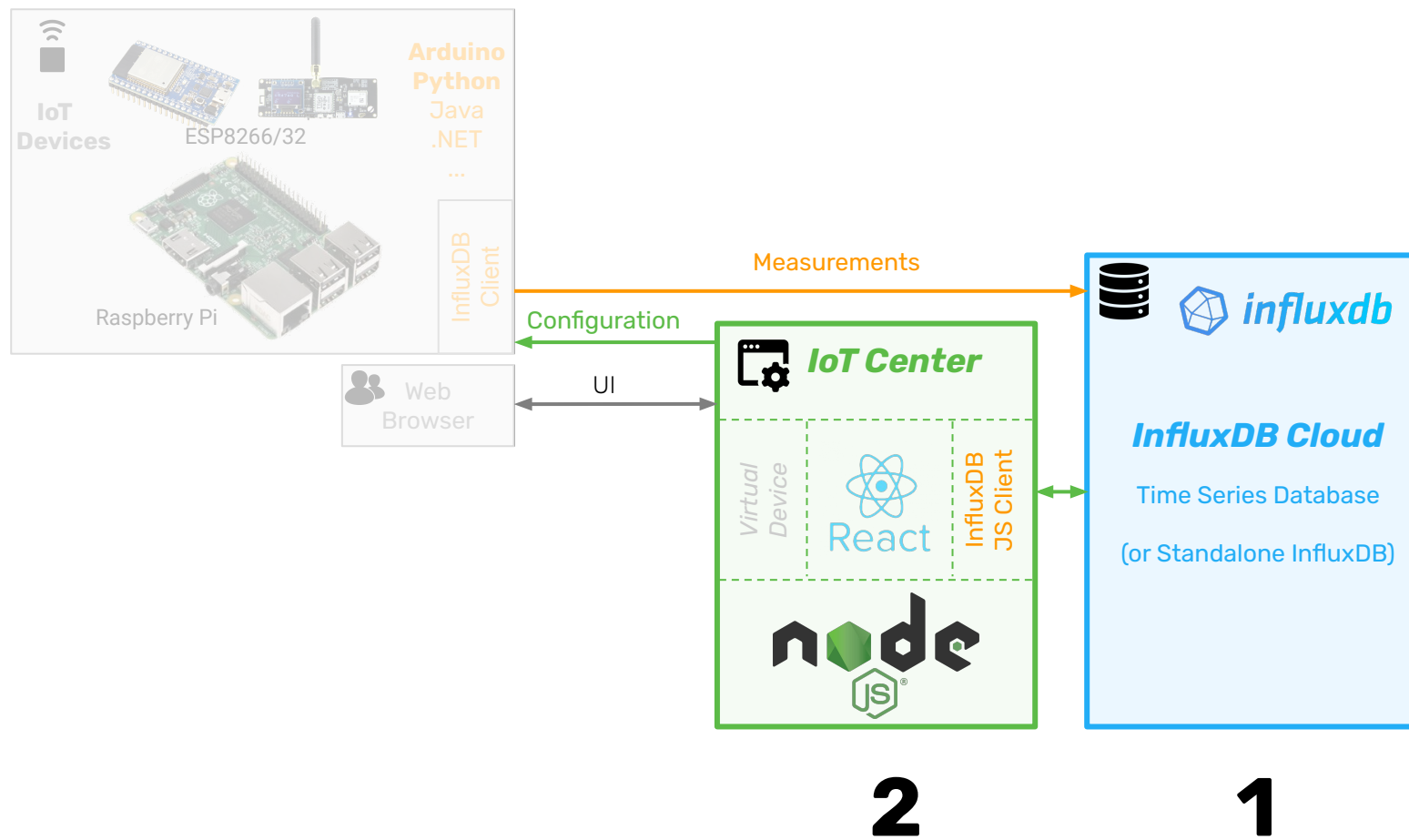# IoT Center Installation

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

Measurements

Configuration

UI

IoT Center

Virtual Device

React

InfluxDB JS Client

node JS

InfluxDB Cloud

Time Series Database

(or Standalone InfluxDB)

IoT Devices

ESP8266/32

Raspberry Pi

Arduino
Python
Java
.NET
...

InfluxDB Client

Web Browser

influxdb

2

1

Create InfluxDB Cloud Account

Skip this if you already have the InfluxDB account
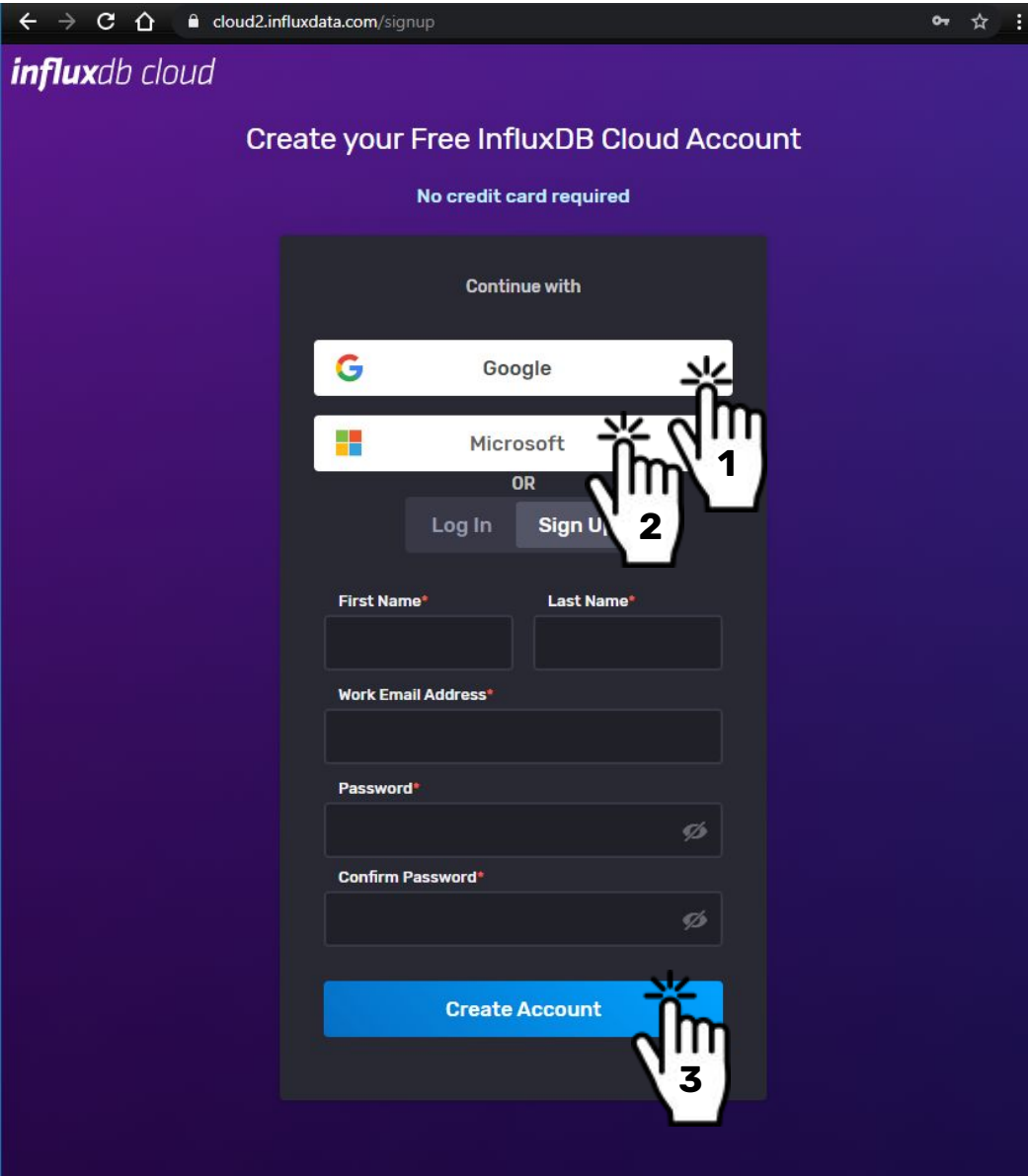
Sign up to Influxdb Cloud

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**
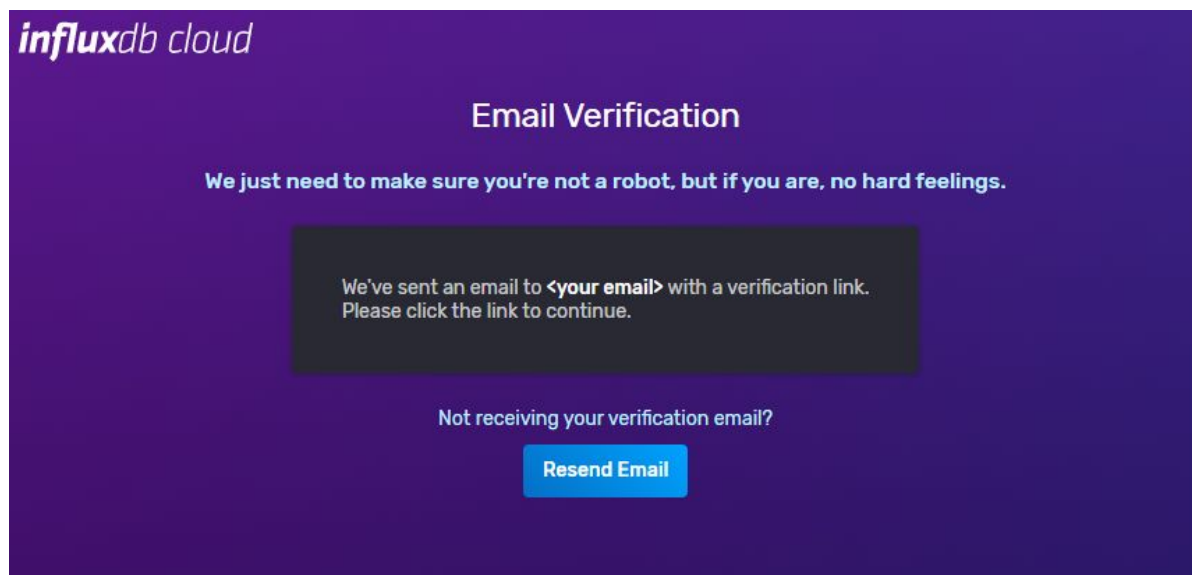   - Fill Name, Email, Password
   - Receive email for validation

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**
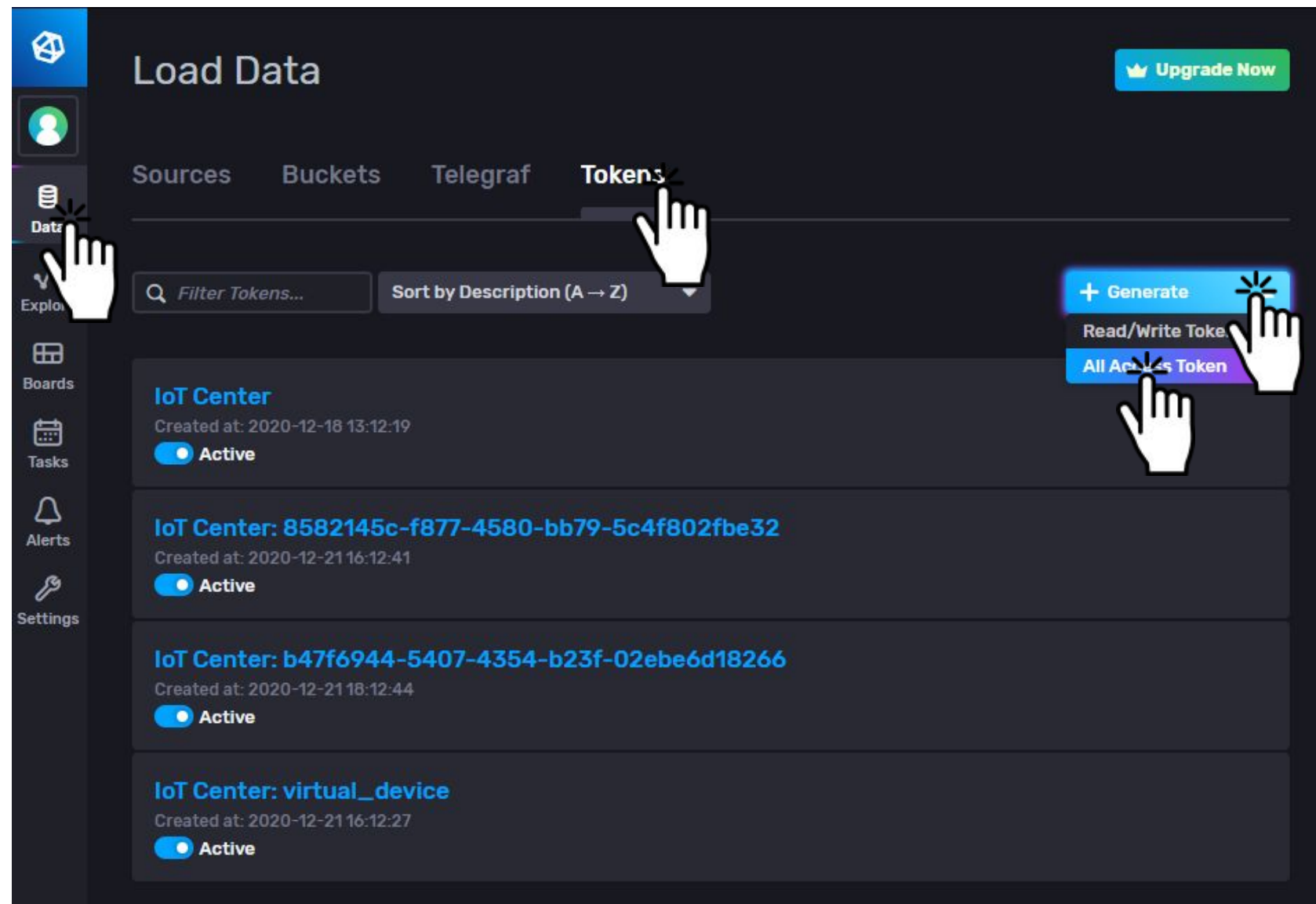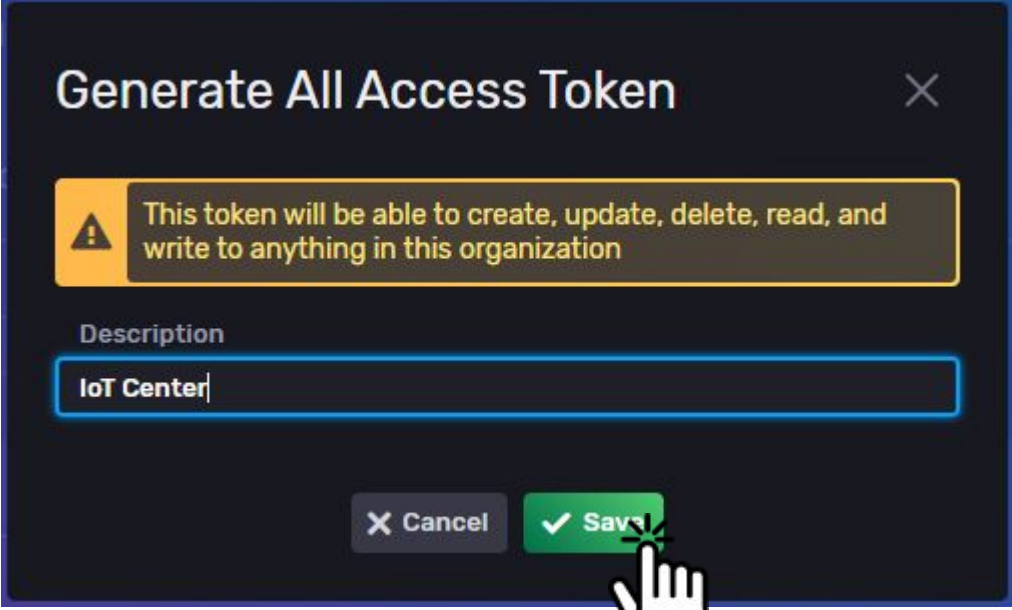
Define API Token Name

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

IoT Center

5IUsHT6nKQGL8TNcKkK67i3pngq5N00jjmjeUGvvxCOEDaBHWSnxdhnF3DvZq5FkYv1eNi4Y8HSHJFmg_IMkbQ==

Copy to Clipboard   IoT Center

Summary   ess permissions

authorizations
    read
    write

buckets
    read
    write

checks
    read
    write

dashboards
    read
    write

dbrp
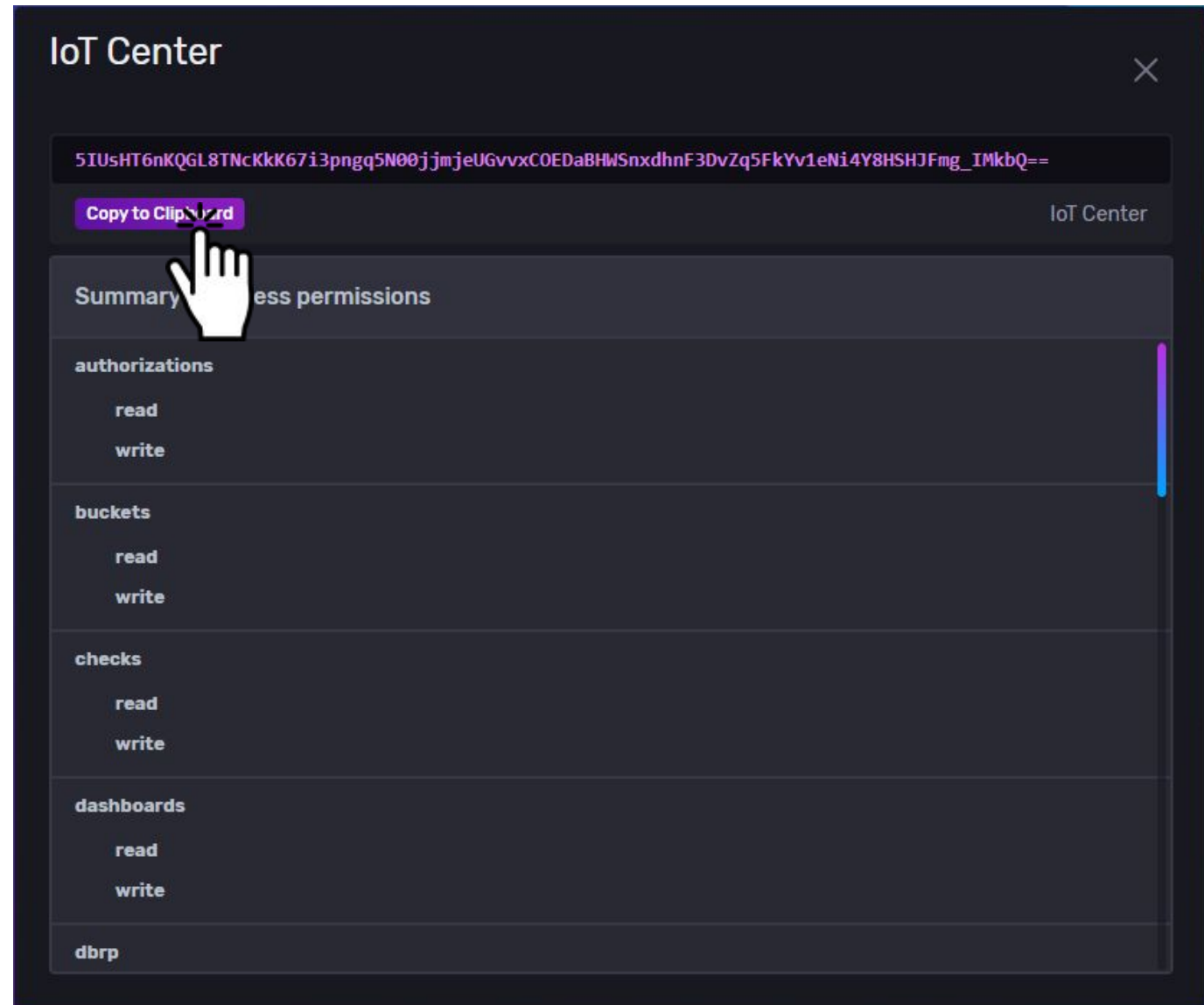
Tools installation for macOS

- 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
```

Downloads

 macOS   Windows

 Linux/Unix

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***
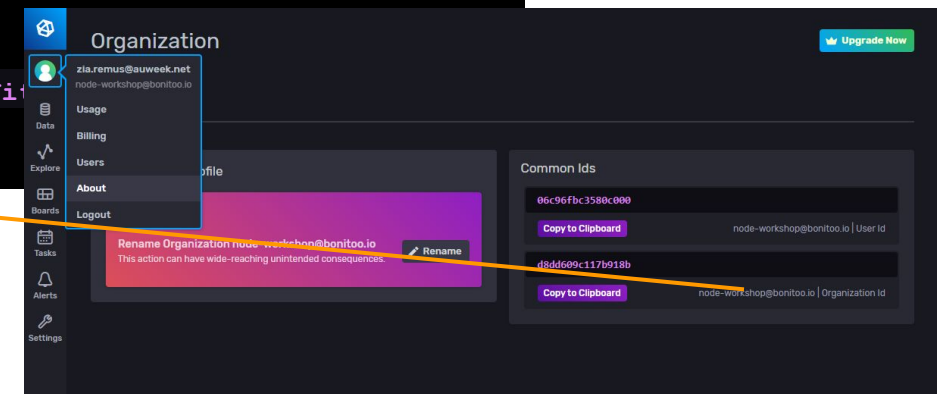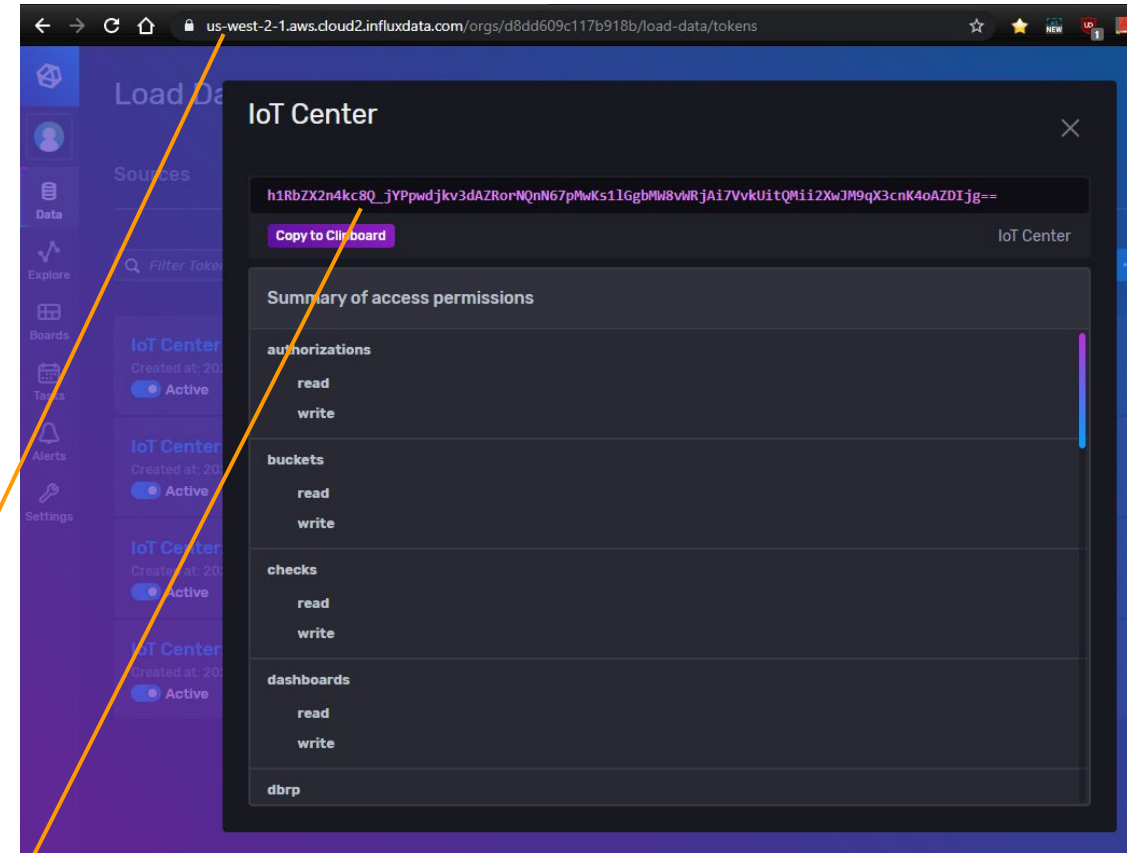
Configure start scripts

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_jYPpwdjkv3dAZRorNQnN67pMwKs1lGgbMW8vWRjAi7VvkUit

SET INFLUX_ORG=node-workshop@bonitoo.io
```

Monitoring Template Installation

Install Dashboard 1/2

Left Menu

- Settings

Tab

- Templates

Paste the URL

- URL below
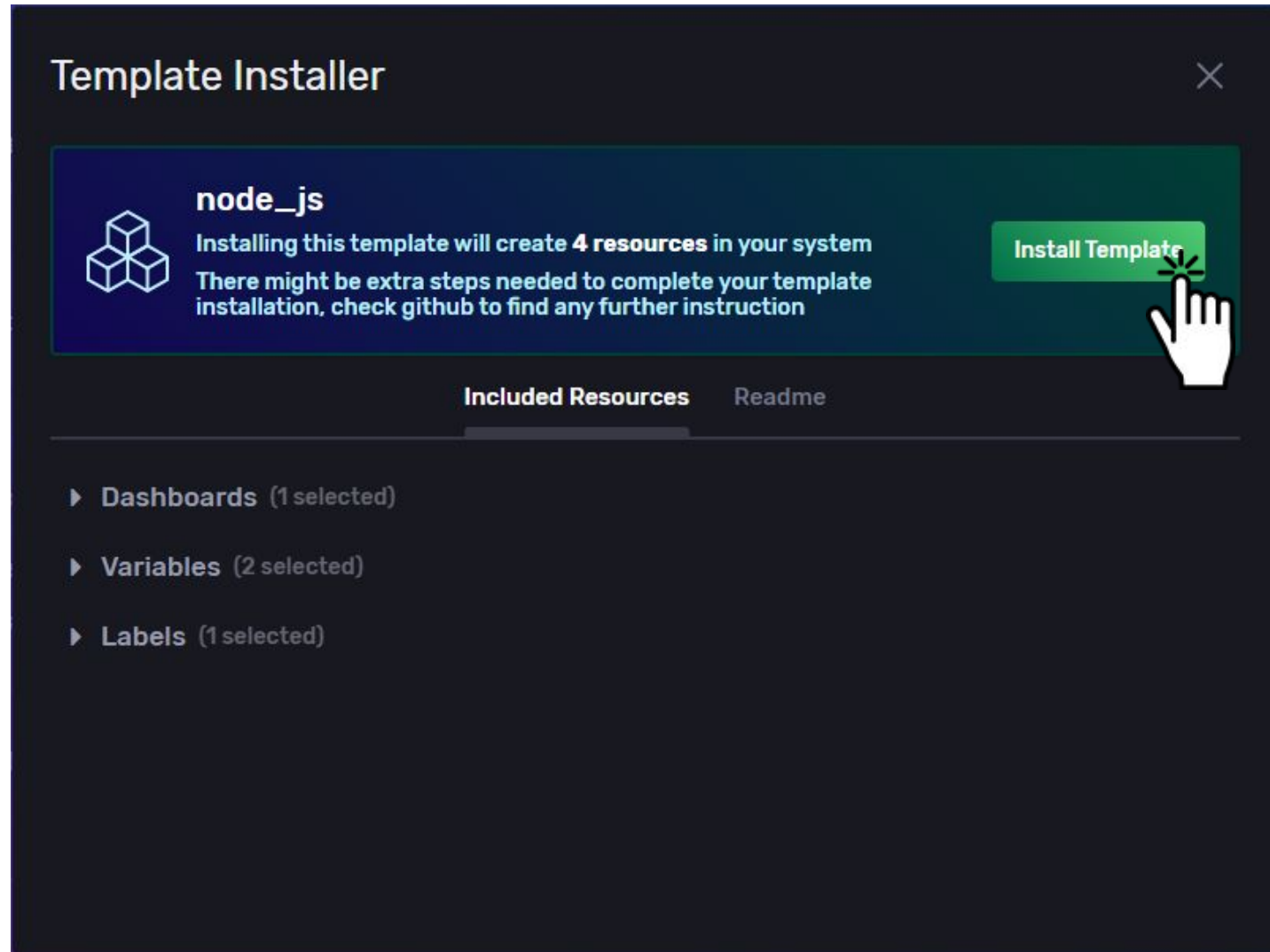
Button

- Lookup template

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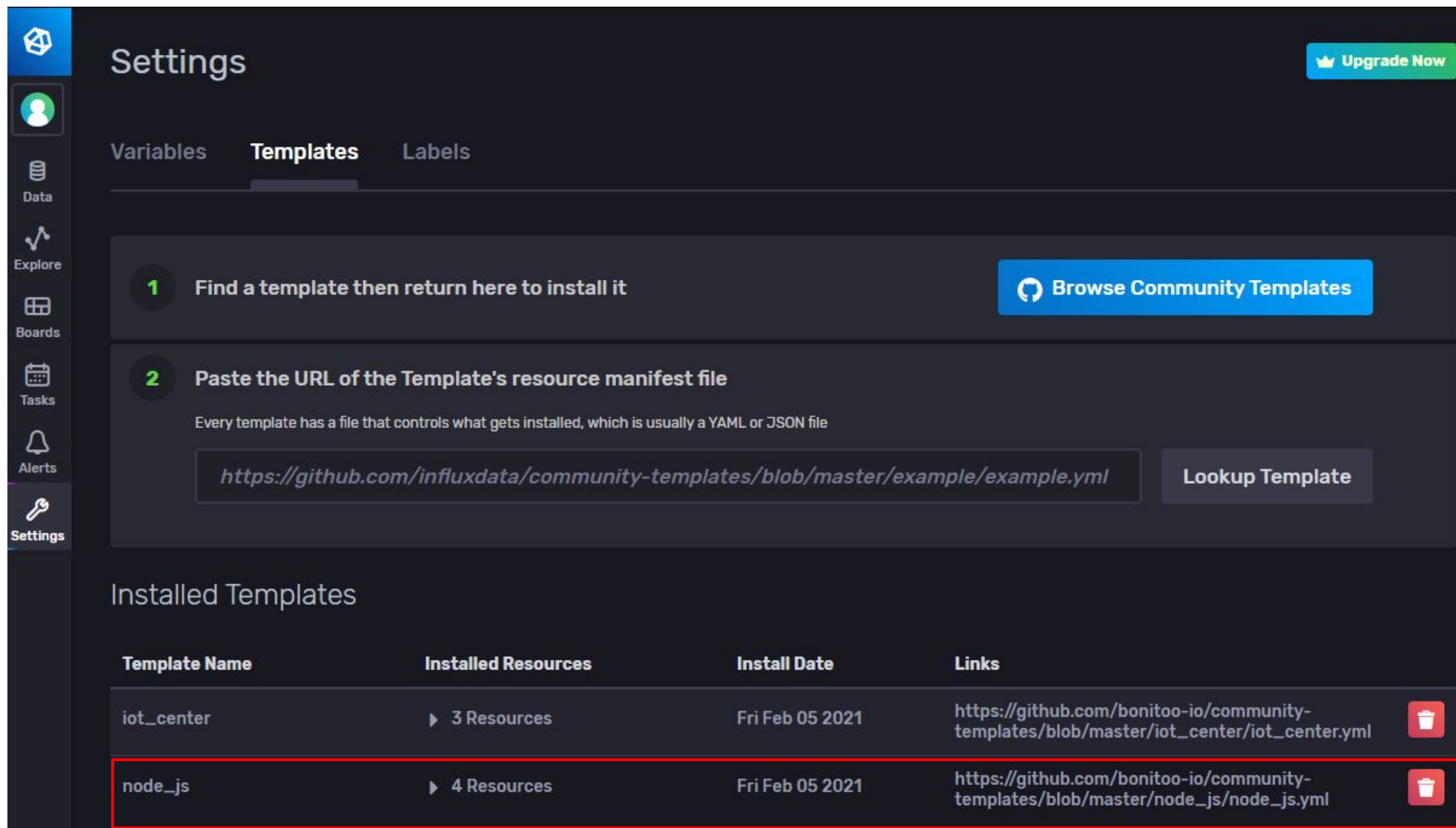
Confirm imported template

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
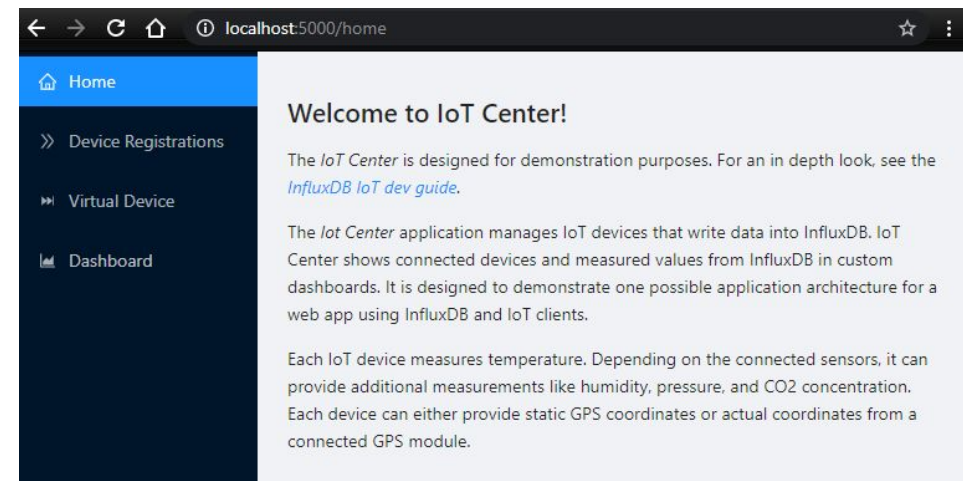
Virtual Device – Generate demo data

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

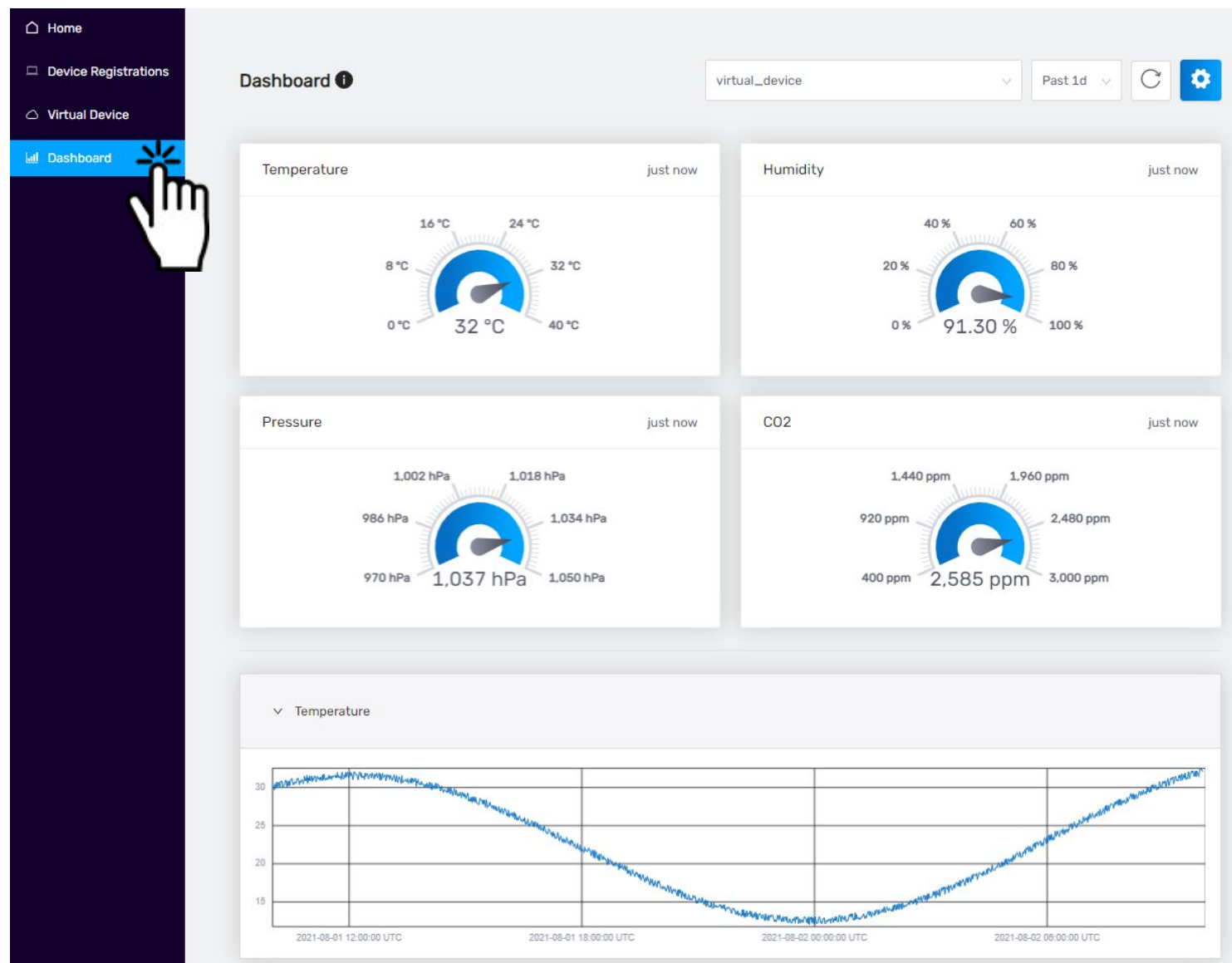Error: 500 Error: 401 Unauthorized : {"code":"unauthorized","message":"unauthorized access"}
- fix **INFLUX_TOKEN** - invalid credentials
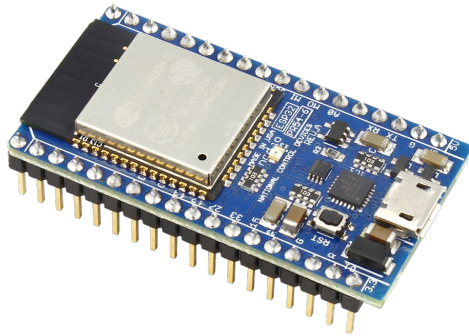
Test Demo Data

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
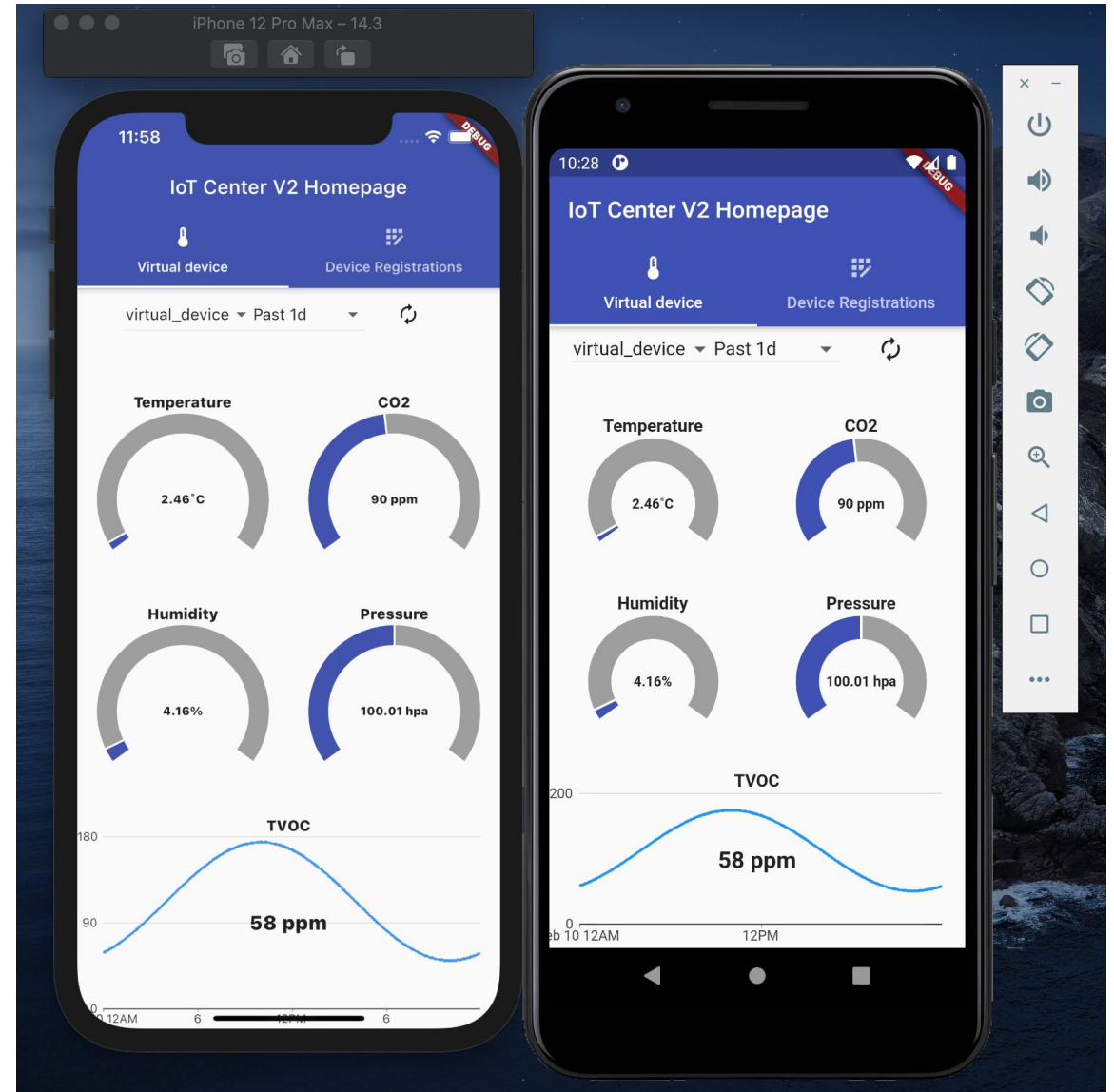
Break - 5 minutes

05:00

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
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