

<https://www.facebook.com/lamloeicom>



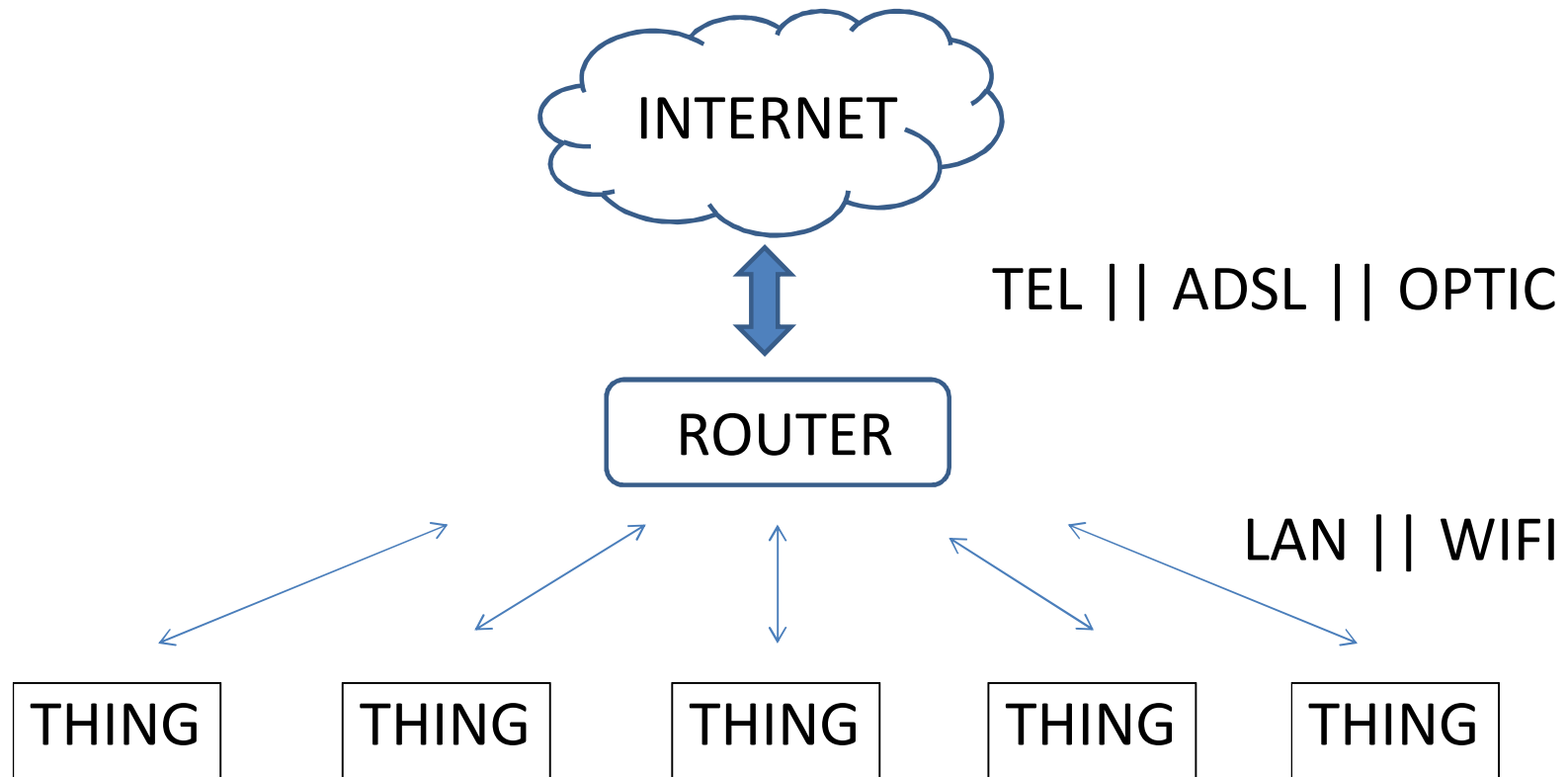
## สมัคร Netpie

จะได้

1. User
2. Password - สำหรับเข้าหน้าเว็บ
3. Appid
4. Appkey
5. Appsecret - สำหรับให้ Thing เข้าใช้งาน

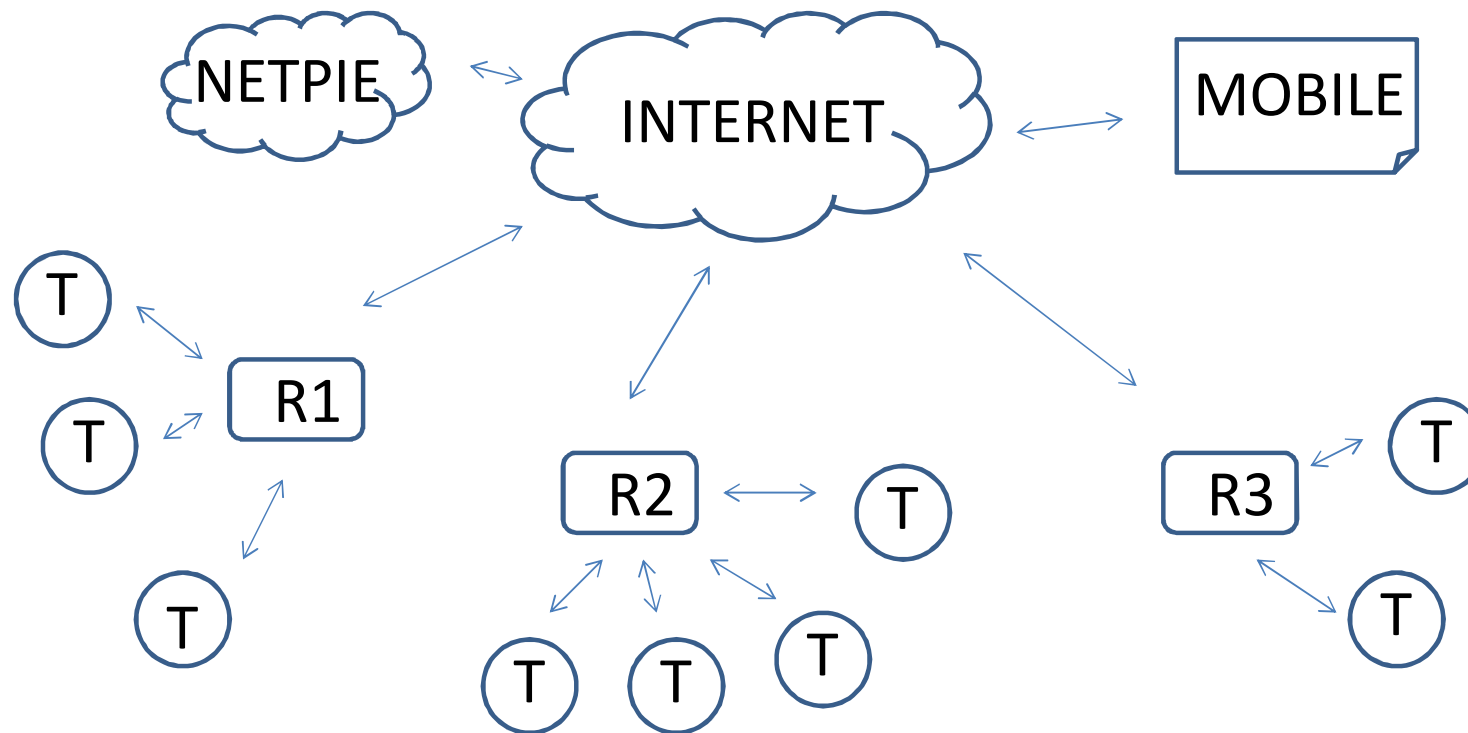


# Internet of Thing





# Internet of Thing

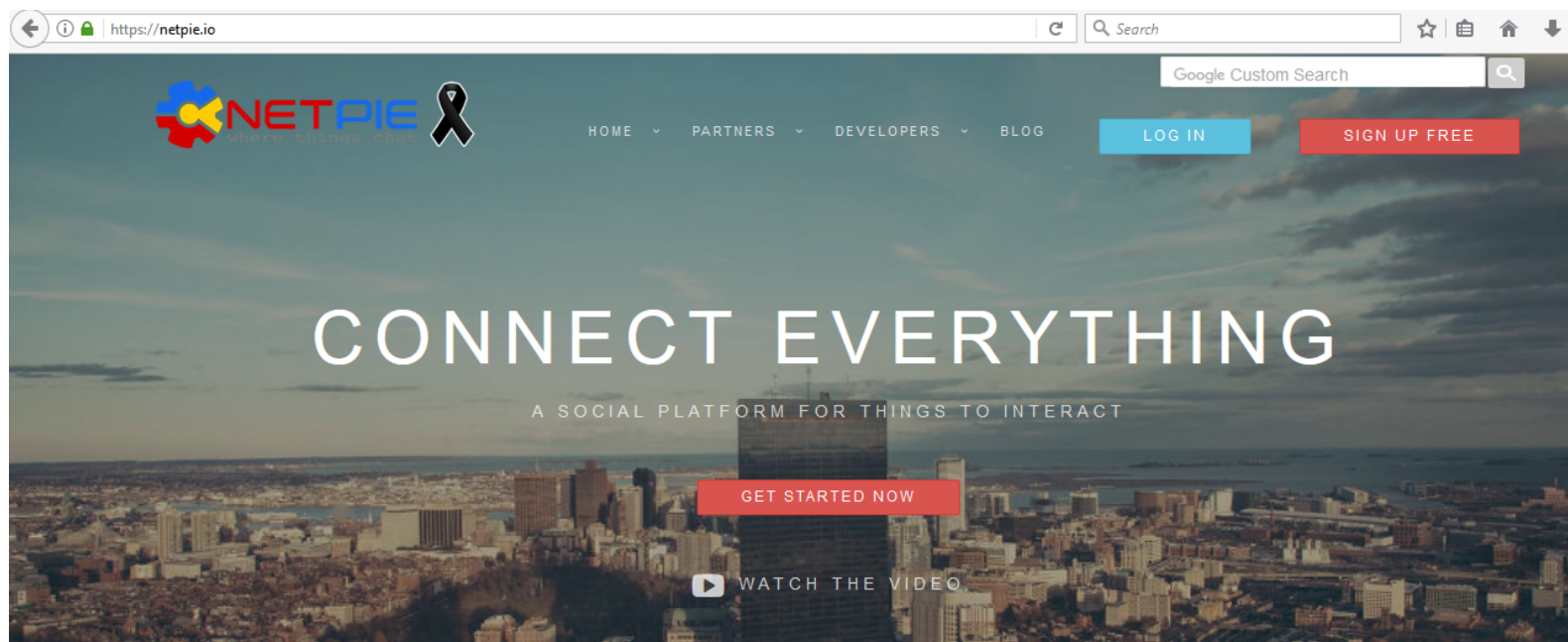




# สมัคร Netpie

<https://netpie.io/>

SIGN UP FREE แล้วทำตามขั้นตอน





# LOGIN

Google Custom

HOME ▾ PARTNERS ▾ DEVELOPERS ▾ BLOG

LOG IN

## LOGIN

USERNAME OR EMAIL ADDRESS

PASSWORD

LOGIN

[Forgot your password?](#)



## RESOURCES > APPLICATIONS +

The screenshot shows the NetPie website interface. At the top, there is a navigation bar with links for HOME, PARTNERS, DEVELOPERS, BLOG, and RESOURCES. The RESOURCES dropdown menu is open, showing options for APPLICATIONS, FREEBOARDS, and FEEDS(beta). Below the navigation bar, there is a section titled 'APPLICATIONS' with a large number '1' and a button labeled 'APPLICATIONS'. To the right, there is a section titled 'THINGS' with a large number '2' and a button labeled 'THINGS'. Below these sections, there is a form titled 'APPLICATION' with a text input field containing 'LAML' and a button labeled 'CREATE'. A red circle highlights a plus sign icon in the top right corner of the 'APPLICATION' form.

Google Custom Search

HOME PARTNERS DEVELOPERS BLOG RESOURCES

Home > Applications


APPLICATIONS

THINGS


APPLICATION

LAML

CREATE CANCEL





APPLICATION (APPID)


 LAML

DELETE

0  
APPLICATION KEY

 Device Key,  Session Key

APPLICATION KEY



CREATE

CANCEL

ตั้งชื่อ MyDevice  
คลิกปุ่ม CRATE



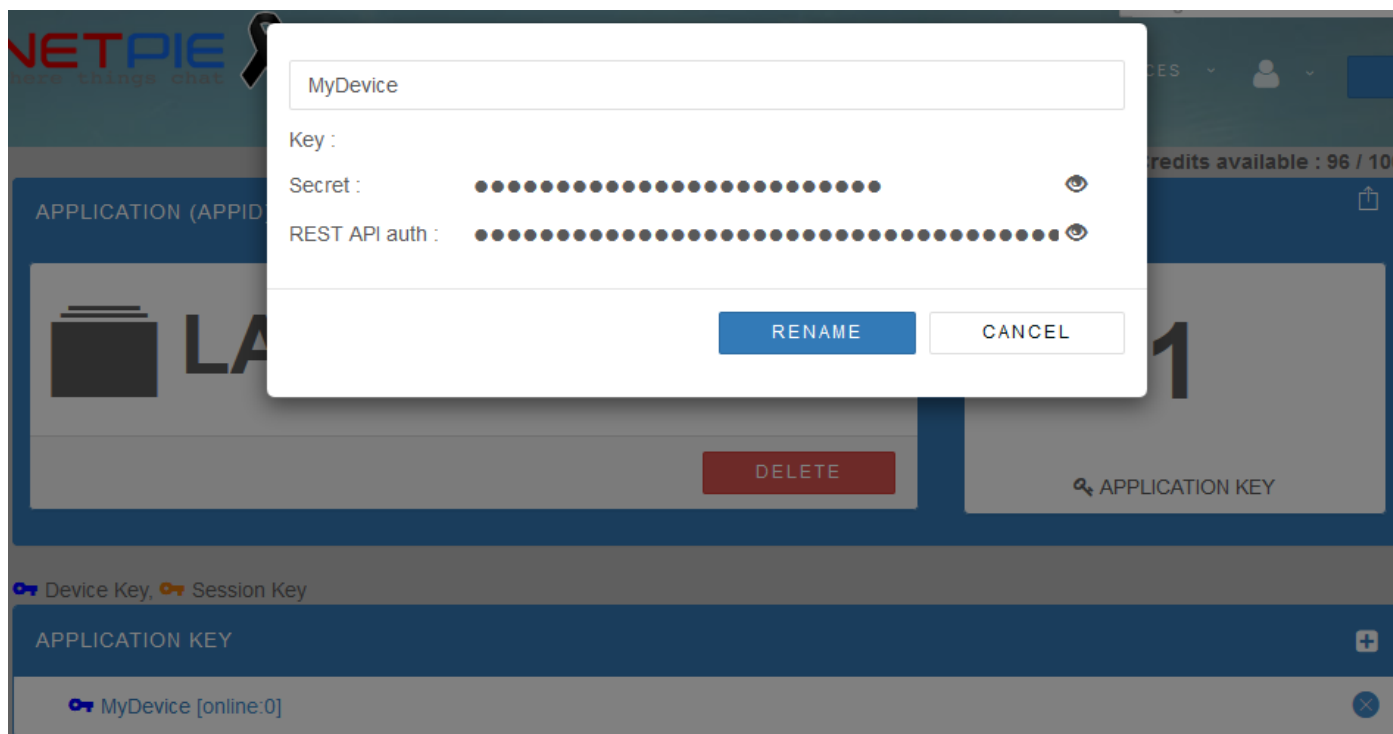


คลิกที่ MyDevice จะได้

APPID: LAML

Key: XXX

Secret: XXX





## ดาวน์โหลด Library

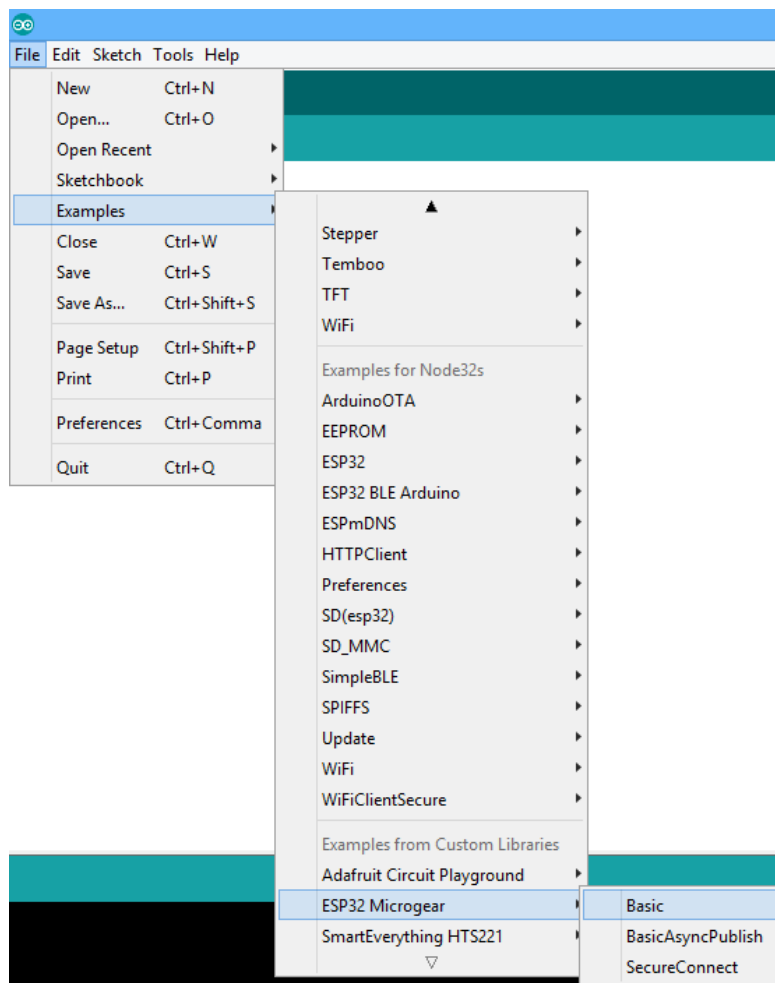
- ดาวน์โหลดไฟล์ [https://github.com/lamloei/ESP32\\_Microgear](https://github.com/lamloei/ESP32_Microgear)
- แยกไฟล์ลงโฟลเดอร์ Arduino/libraries
- ปิดและเปิด Arduino IDE ใหม่

This PC > Documents > Arduino > libraries

| Name                             | Date modified   | Type        | Size |
|----------------------------------|-----------------|-------------|------|
| ESP32_Microgear-master           | 17/2/2561 15:52 | File folder |      |
| sme-hts221-library-master        | 17/2/2561 13:51 | File folder |      |
| SparkFun_LSM9DS1_Arduino_Library | 17/2/2561 13:51 | File folder |      |



# File > Examples > ESP32 Microgear > Basic



//ใส่ค่าตัวแปร

```
const char* ssid    = "lamloiWiFi";
const char* password = "123456789";
```


```
#define APPID  <APPID>
```


```
#define KEY    <APPKEY>
```

```
#define SECRET <APPSECRET>
```

```
#define ALIAS  "Node32Pico"
```






**LAML**


DELETE




1

🔍 APPLICATION KEY

🔑 Device Key, 🔑 Session Key

APPLICATION KEY 

▼ 🔑 MyDevice [online:1] 

 **Node32Pico**  



# FreeBoard

1. เปิดไฟล์ node32lite\_sht30.ino
2. ปรับ ssid, password, APPID, KEY, SECRET, ALIAS

The screenshot shows the Arduino IDE with the file 'node32lite\_sht30.ino' open. The code includes headers for WiFi, MicroGear, Wire, and a custom library 'ClosedCube\_SHT31D.h'. It defines configuration constants for SSID, password, APPID, KEY, SECRET, and ALIAS. The serial monitor on the right shows the device starting up, connecting to WiFi, and reporting humidity and temperature data.

```
node32lite_sht30.ino
File Edit Sketch Tools Help
node32lite_sht30 $
#include <WiFi.h>
#include <MicroGear.h>
#include <Wire.h>
#include "ClosedCube_SHT31D.h"

ClosedCube_SHT31D sht3xd;
SHT31D result;

// ----- แก้ค่า config 7 ค่าข้างล่างนี้ -----
const char* ssid = "lamloeiWIFI"; // 
const char* password = "123456789"; // รหัสผ่าน

#define APPID "LAML"
#define KEY ""
#define SECRET ""
#define ALIAS "myFeed" // แทนที่ด้วย

// -----

#define LEDSTATETOPIC "/ledstate/" ALIAS
#define DHTDATATOPIC "/dht/" ALIAS

#define BUTTONPIN 0 // 
#define LEDPIN LED_BUILTIN

int currentLEDState = 0; // ให้อุ่นเป็น OFF
int lastLEDState = 1;
int currentButtonState = 1; // หมายถึงปุ่ม flash ต่อเข้ากับ GPIO0 แบบ pull-up
int lastButtonState = 0;
```

Serial Monitor Output:

```
.....Starting...
..WiFi connected
IP address:
192.168.43.196
Connected to NETPIE...
Humid: 44.01 %, Temp: 30.40 °C
Sending --> 44.01,30.40
Humid: 43.98 %, Temp: 30.43 °C
Sending --> 43.98,30.43
Humid: 43.94 %, Temp: 30.40 °C
Sending --> 43.94,30.40
Humid: 43.94 %, Temp: 30.42 °C
Sending --> 43.94,30.42
Humid: 43.92 %, Temp: 30.43 °C
☐ Autoscroll ☐ Show timestamp
```

[https://github.com/lamloei/present2/tree/master/20190228030102\\_Node32Lite\\_Basic](https://github.com/lamloei/present2/tree/master/20190228030102_Node32Lite_Basic)



# LAML

DELETE

# 1

🔍 APPLICATION KEY

🔑 Device Key, 🔑 Session Key

APPLICATION KEY



▼ 🔑 MyDevice [online:1]

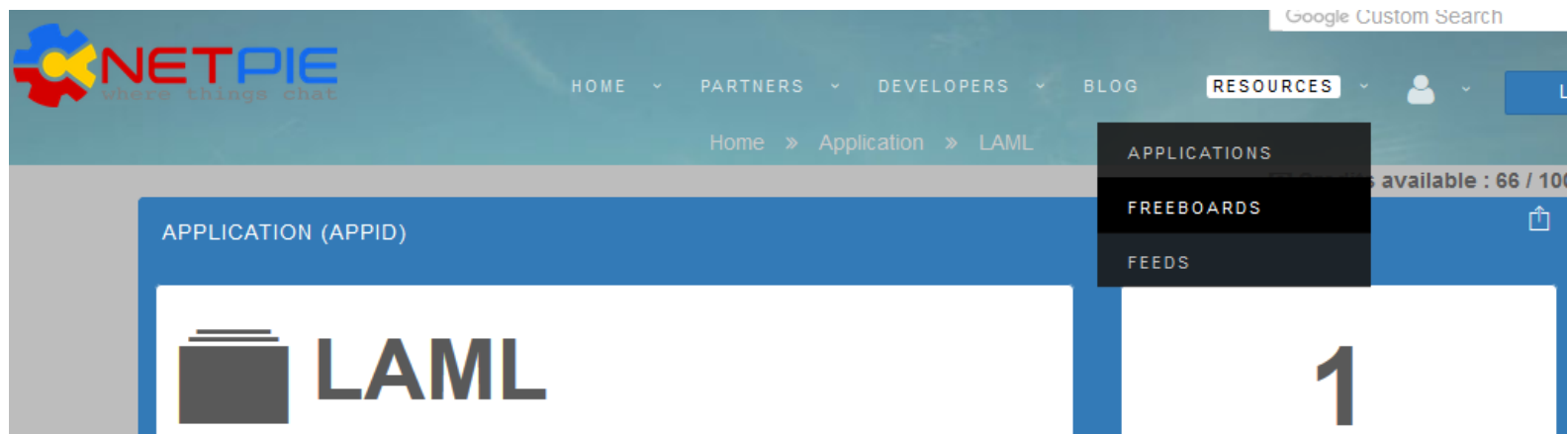


🔌 myFeed



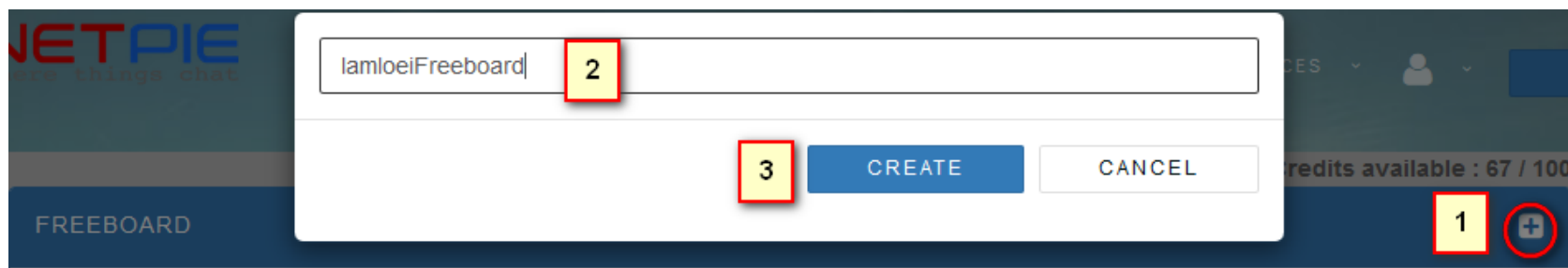


## RESOURCES > FREEBOARDS



CLICK +

ตั้งชื่อ แล้วคลิกปุ่ม CREATE







# lamloeiFreeboard

FREEBOARD



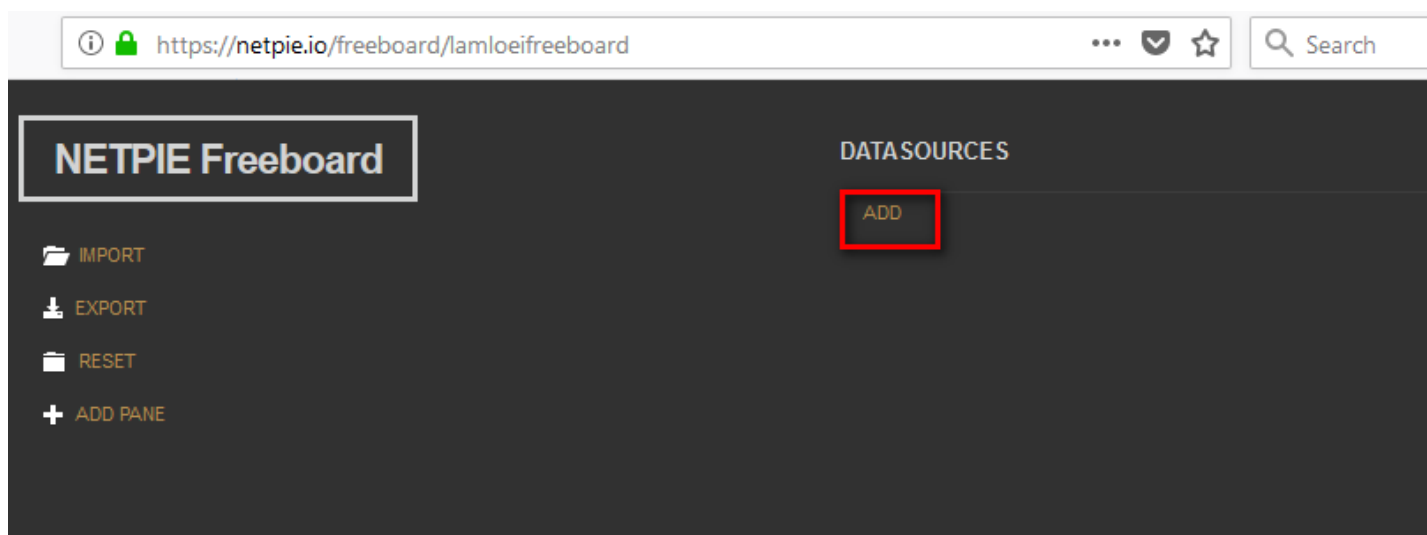
laml



lamloeiFreeboard



CLICK ที่ชื่อที่ตั้งขึ้นใหม่  
คลิกปุ่ม ADD





Connect to NETPIE as a microgear to communicate real-time with other microgears in the same App ID. The microgear of this datasource is referenced by microgear[DATASOURCENAME]

TYPE

NAME

APP ID

NETPIE App ID obtained from <https://netpie.io/app>

KEY

Key

SECRET

Secret

SUBSCRIBED TOPICS

Topics of the messages that this datasource will consume, the default is /# which means all messages in this app ID.

ONCREATED ACTION

JS code to run after a datasource is created

ONCONNECTED ACTION

JS code to run after a microgear datasource is connected to NETPIE

SAVE

CANCEL



## DataSource myFreeboard

- TYPE NETPIE Mirogear
- ตั้งชื่อ NAME (myFreeboard)
- ใส่ค่า APP ID
- KEY
- SECRET
- แล้วคลิกปุ่ม SAVE

ถ้าเชื่อมต่อได้จะขึ้นชื่อ Name ที่ตั้งไว้ กับค่า Last Updated

**NETPIE Freeboard**

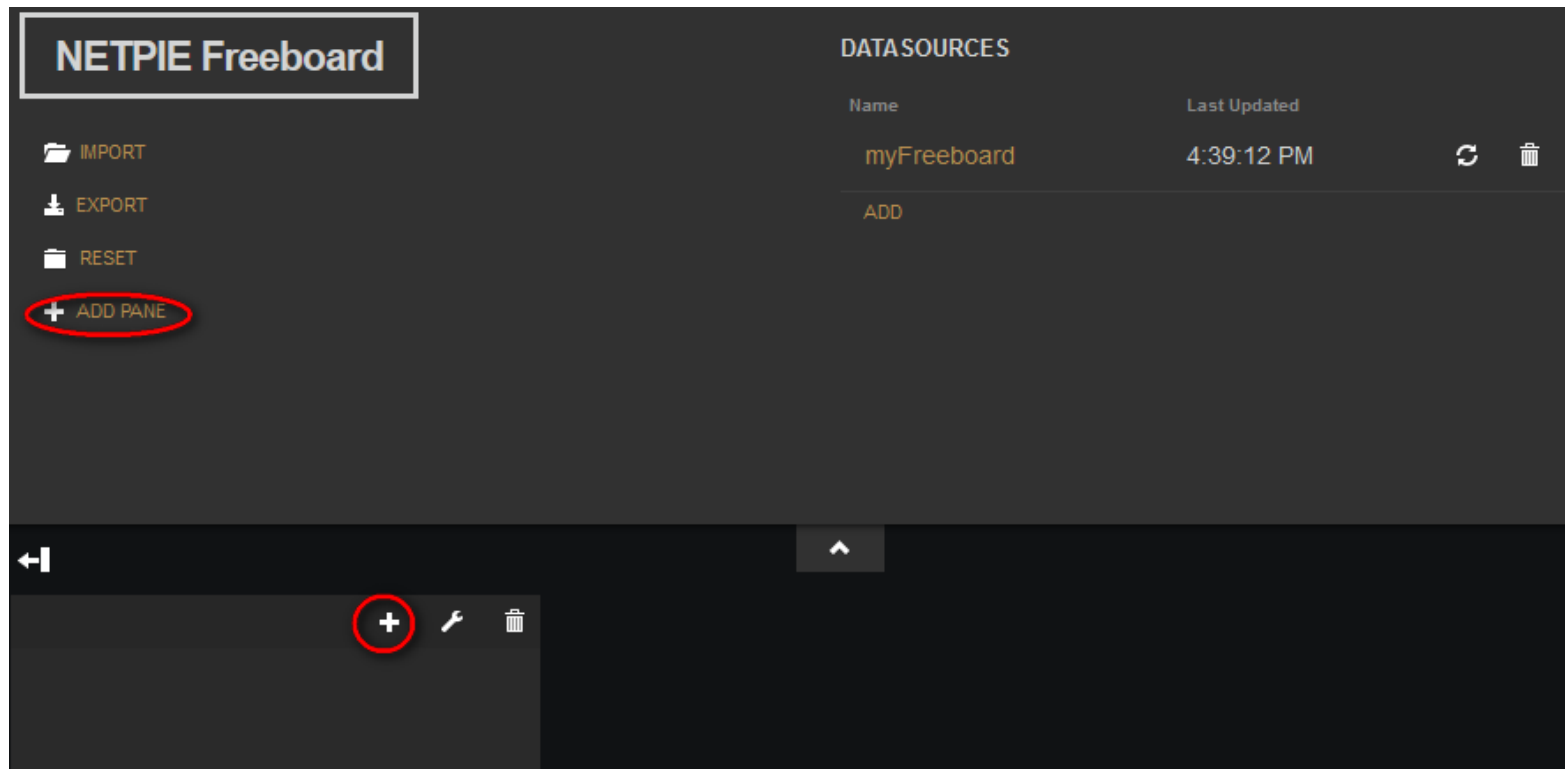
- IMPORT
- EXPORT
- RESET
- + ADD PANE

**DATASOURCES**

| Name        | Last Updated |     |
|-------------|--------------|-----|
| myFreeboard | 4:36:48 PM   | ↻ 🗑 |
| ADD         |              |     |



# ADD PANE > +





## ADD PANE > +

TYPE เป็น Text

value เป็น datasources["myFreeboard"]["/LAML/dht/myFeed"]

คลิกปุ่ม SAVE

WIDGET

TYPE

Text

TITLE

SIZE

Regular

VALUE

datasources["myFreeboard"]["/LAML/dht/myFeed"]

+ DATASOURCE

JS EDITOR

INCLUDE SPARKLINE

☐ NO

ANIMATE VALUE CHANGES

☒ YES

UNITS

SAVE

CANCEL



# NETPIE Freeboard

- IMPORT
- EXPORT
- RESET
- + ADD PANE

## DATASOURCES

| Name        | Unit |
|-------------|------|
| myFreeboard | 4    |

←

49.00,44.42

+ ↻ 🗑

⌂

49.00,44.42

Autoscroll

Sending --> 49.00,44.66  
Humid: 49.00 %, Temp: 44.70 °C  
Sending --> 49.00,44.70  
Humid: 49.00 %, Temp: 44.68 °C  
Sending --> 49.00,44.68  
Humid: 49.00 %, Temp: 44.66 °C  
Sending --> 49.00,44.66  
Humid: 49.00 %, Temp: 44.55 °C  
Sending --> 49.00,44.55  
Humid: 49.00 %, Temp: 44.53 °C  
Sending --> 49.00,44.53  
Humid: 49.00 %, Temp: 44.51 °C  
Sending --> 49.00,44.51  
Humid: 49.00 %, Temp: 44.42 °C  
Sending --> 49.00,44.42



## ADD PANE > +

TYPE เป็น Gauge

TITLE เป็น humi

value เป็น `datasources["myFreeboard"]["/LAML/dht/myFeed"].split(",")[0]`

UNITS เป็น %

คลิกปุ่ม SAVE

\*\*\* `.split(",")[0]` ต้องพิมพ์เพิ่มต่อท้ายเอง

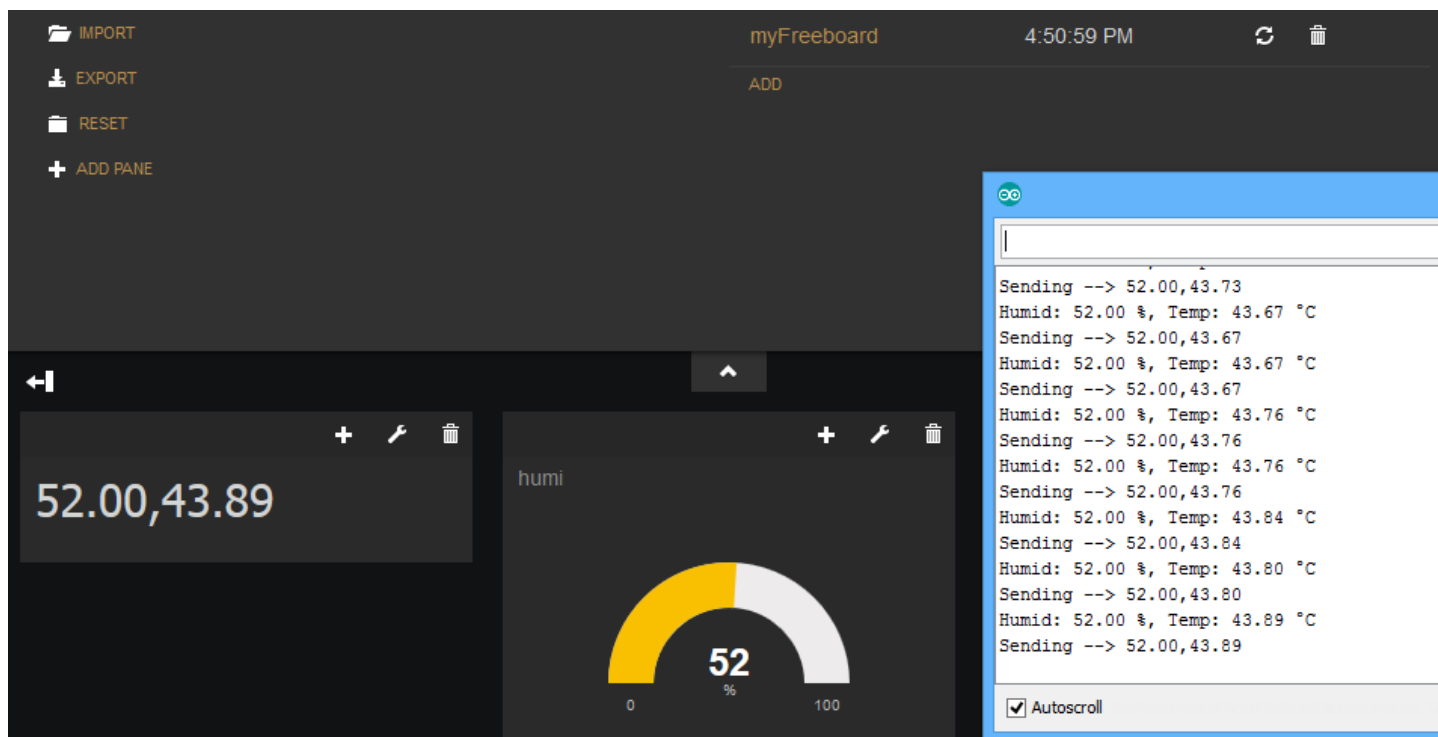
WIDGET

|         |   |                         |
|---------|---|-------------------------|
| TYPE    | Gauge   |                         |
| TITLE   | humi  |                         |
| VALUE   | <code>datasources["myFreeboard"]["/LAML/dht/myFeed"].split(",")[0]</code> | + DATASOURCE  JS EDITOR |
| UNITS   | %   |                         |
| MINIMUM | 0   |                         |
| MAXIMUM | 100   |                         |

SAVE
CANCEL



## สามารถขยับ panel ได้







## ADD PANE > +

TYPE เป็น Gauge

TITLE เป็น อุณหภูมิ

value เป็น `datasources["myFreeboard"]["/LAML/dht/myFeed"].split(",")[1]`

UNITS เป็น C

คลิกปุ่ม SAVE

\*\*\* `.split(",")[1]` ต้องพิมพ์เพิ่มต่อท้ายเอง

WIDGET

TYPEGauge

TITLEอุณหภูมิ

VALUE
datasources["myFreeboard"]["/LAML/dht/myFeed"].split(",")[1]
+ DATASOURCE
JS EDITOR

UNITS°C

MINIMUM0

MAXIMUM100

SAVE CANCEL



# Freeboard

The image displays the Freeboard web interface. On the left, a terminal window shows a stream of data being sent from a device. The data consists of humidity and temperature readings in a comma-separated format. The terminal window has a 'Send' button and a 'Clear output' button. Below the terminal window, there are three dashboard widgets. The first widget is a text display showing the latest data '50.00,43.62'. The second widget is a gauge labeled 'humi' showing a value of 50%. The third widget is a gauge labeled 'อุณหภูมิ' (Temperature) showing a value of 43.62 °C. On the right side of the interface, there is a 'DATASOURCES' section with a table listing the data sources. The table has columns for 'Name' and 'Last Updated'. The first entry is 'myFreeboard' with a last updated time of '4:56:36 PM'. There is also an 'ADD' button below the table.

| Name        | Last Updated |
|-------------|--------------|
| myFreeboard | 4:56:36 PM   |

50.00,43.62

humi

อุณหภูมิ

50 %

43.62 °C



## ADD PANE > +

TYPE เป็น Toggle

TOGGLE CAPTION เป็น ปุ่ม

TOGGLE STATE เป็น

`datasources["myFreeboard"]["/LAML/ledstate/myFeed"]==1`

ONTOGGLEON ACTION เป็น

`microgear["myFreeboard"].chat("myFeed","1")`

OFFTOGGLEOFF ACTION เป็น

`microgear["myFreeboard"].chat("myFeed","0")`

คลิกปุ่ม SAVE

\*\*\* `==1` ต้องพิมพ์เพิ่มต่อท้ายเอง

\*\*\* `microgear` ต้องพิมพ์เพิ่ม



# WIDGET

**WIDGET**

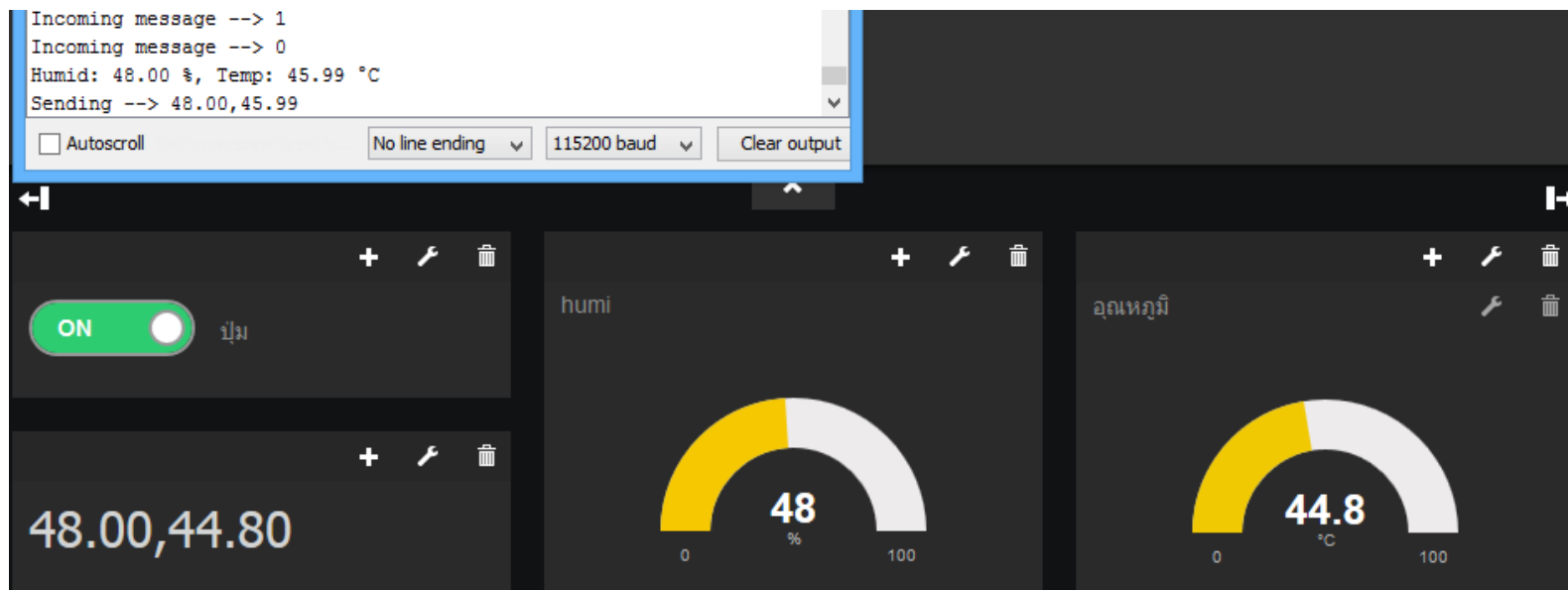
A simple toggle widget that can perform Javascript action.

|                    |   |  |
|--------------------|---|--|
| TYPE               | <input type="text" value="Toggle"/>   |  |
| TOGGLE CAPTION     | <input type="text" value="เปิด"/>   |  |
| TOGGLE STATE       | <input laml="" ledstate="" myfeed"]='=1"/' myfreeboard"]["="" type="text" value="datasources["/> <a href="#">+ DATASOURCE</a> <a href="#">JS EDITOR</a> |  |
|                    | <small>Add a condition to switch a toggle state here. Otherwise it just toggle by click.</small>  |  |
| ON TEXT            | <input type="text" value="ON"/>   |  |
| OFF TEXT           | <input type="text" value="OFF"/>  |  |
| ONTOGGLEON ACTION  | <input myfreeboard"].chat("myfeed","1")"="" type="text" value="microgear["/>  |  |
|                    | <small>JS code to run when a toggle is switched to ON</small>   |  |
| ONTOGGLEOFF ACTION | <input myfreeboard"].chat("myfeed","0")"="" type="text" value="microgear["/>  |  |
|                    | <small>JS code to run when a toggle is switched to OFF</small>  |  |
| ONCREATED ACTION   | <input type="text"/>  |  |
|                    | <small>JS code to run after a toggle is created</small>   |  |

[SAVE](#) [CANCEL](#)



# Freeboard





# Project

