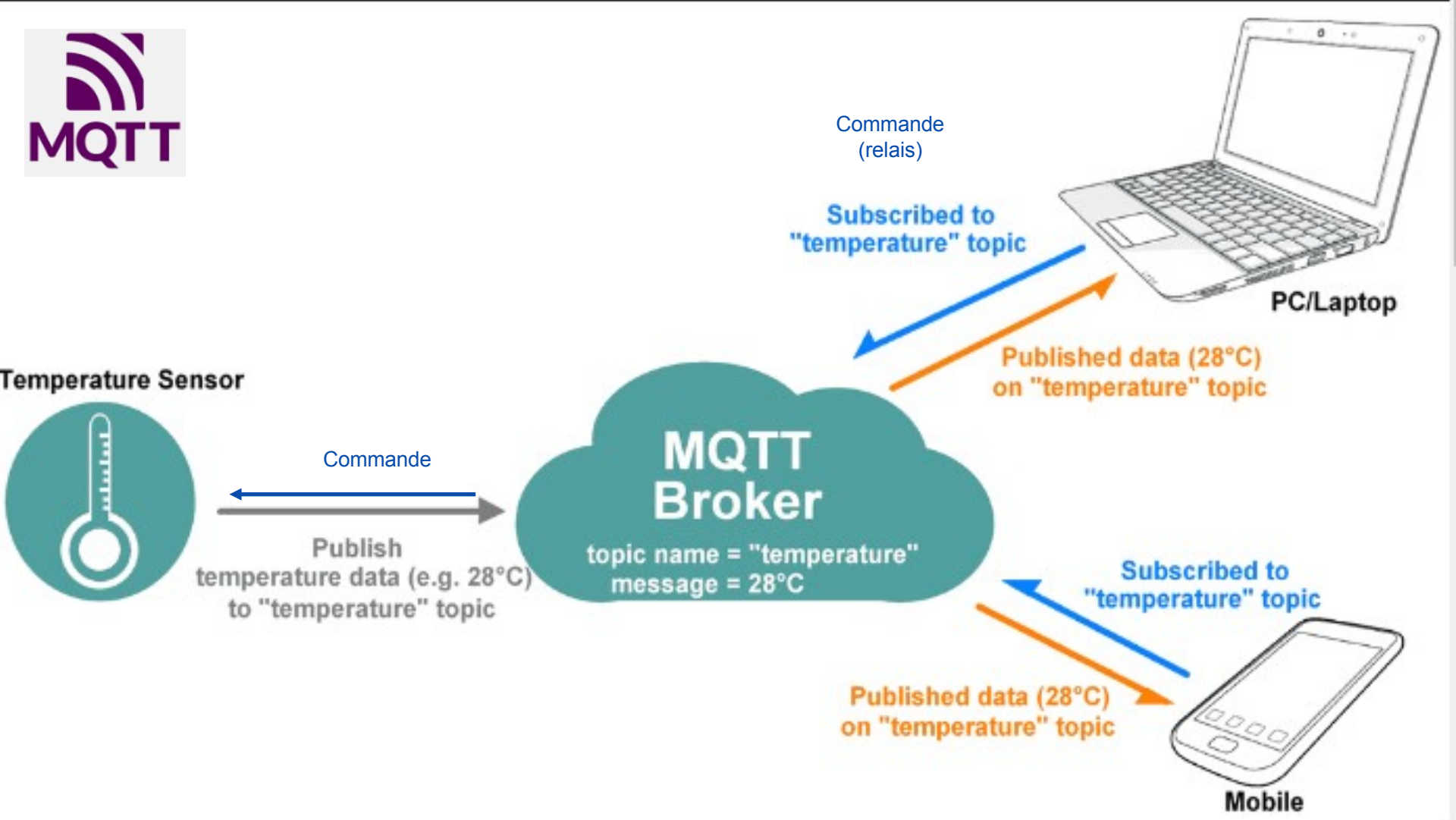
Projet ESP
Arrosage automatique

Rappel MQTT

Capteurs/Actionneurs	ESP32	Tasmota	MQTT	NodeRed	Navigateur	Utilisateur
°C DS18B20			Raspberry	Raspberry	Firefox, Chrome, Opera.	
°C DHT11/22						
Humidité						
Niveau eau		Tasmota Configure Module Configure WiFi Configure MQTT Configure Domoticz Configure Timer Configure Logging Configure Other Configure Template Reset Configuration				
BME180, Barometre, Pression, °C, Altitude			Fablab37110.ddns.net:1883		Fablab37110.ddns.net:xxxx/ui	
Pompe à Eau	90F3AC	tasmota_90F3AC	MOSQUITTO MQTT BROKER mosquitto	Node-RED	Fablab37110.ddns.net:xxxx	
Relais						
ElectroVanne						
Tuyau						Toute resqsemblance avec une personne reelle est purement fortuite ...

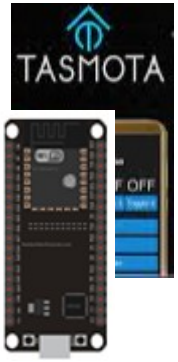

MQTT
Commande
(relais)
Subscribed to
"temperature" topic
PC/Laptop
Published data (28°C)
on "temperature" topic
Temperature Sensor
Commande
MQTT
Broker
topic name = "temperature"
message = 28°C
Publish
temperature data (e.g. 28°C)
to "temperature" topic
Subscribed to
"temperature" topic
Published data (28°C)
on "temperature" topic
Mobile

Exemple

3408B0

tele/tasmota_3408B0/SENSOR = {"DHT11":{"Temperature":21.5 } }

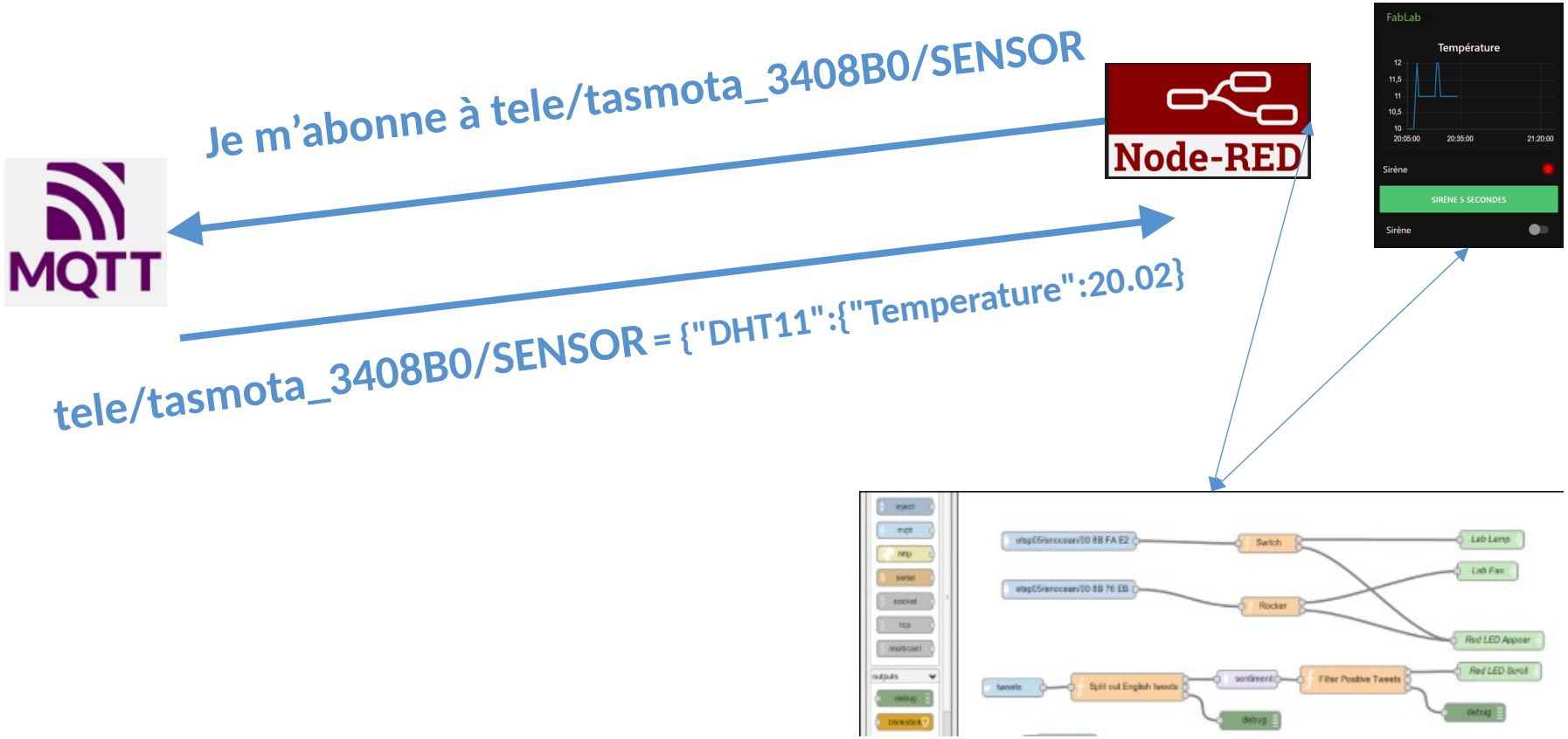
MQTT



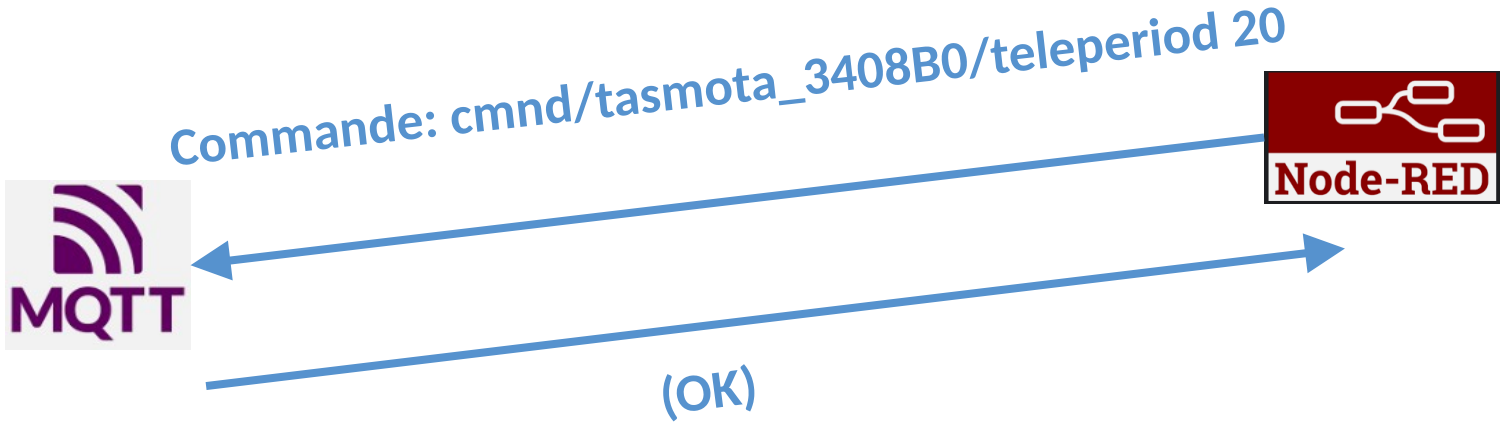
43B0C2

tele/tasmota_43B0C2/SENSOR = {"DHT11":{"Temperature":20.02} }

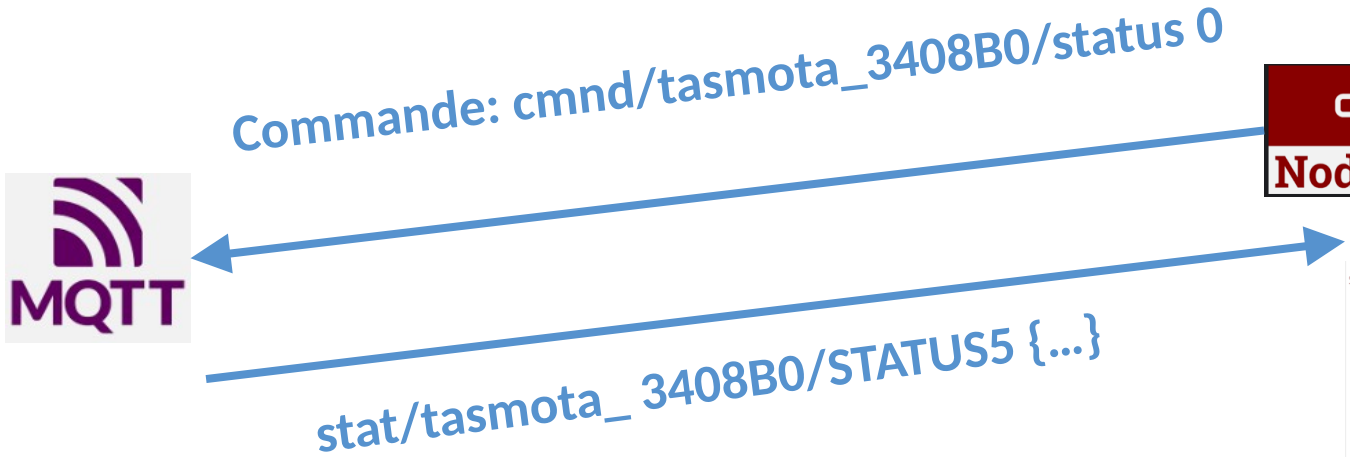
Exemple


Je m'abonne à tele/tasmota_3408B0/SENSOR
MQTT
Node-RED
tele/tasmota_3408B0/SENSOR = {"DHT11":{"Temperature":20.02}
FabLab
Température
12
11,5
11
10,5
10
20:05:00
20:35:00
21:20:00
Sirène
SIRÈNE 5 SECONDES
Sirène

Exemple


Commande: cmnd/tasmota_3408B0/teleperiod 20
Node-RED
MQTT
(OK)

Exemple



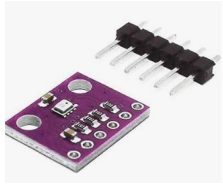
stat/tasmota_628294/STATUS5 : msg.payload : Object


```
▼object
▼StatusNET: object
    Hostname: "tasmota-628294-0660"
    IPAddress: "192.168.1.19"
    Gateway: "192.168.1.254"
    Subnetmask: "255.255.255.0"
    DNSServer1: "192.168.1.254"
    DNSServer2: "0.0.0.0"
    Mac: "10:52:1C:62:82:94"
  ▶ Ethernet: object
    Webserver: 2
    HTTP_API: 1
    WifiConfig: 4
    WifiPower: 17
```

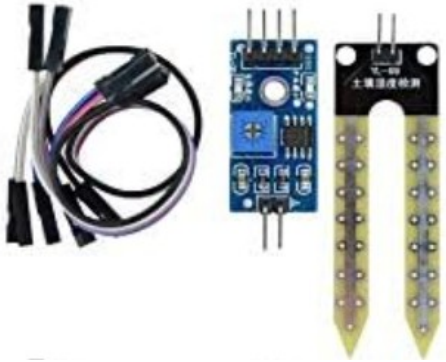
Les composants

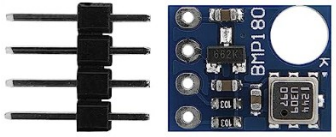
L’ESP

Capteurs



AZDelivery BME280 Barometric Temperature Humidity Air Pressure Sensor Module

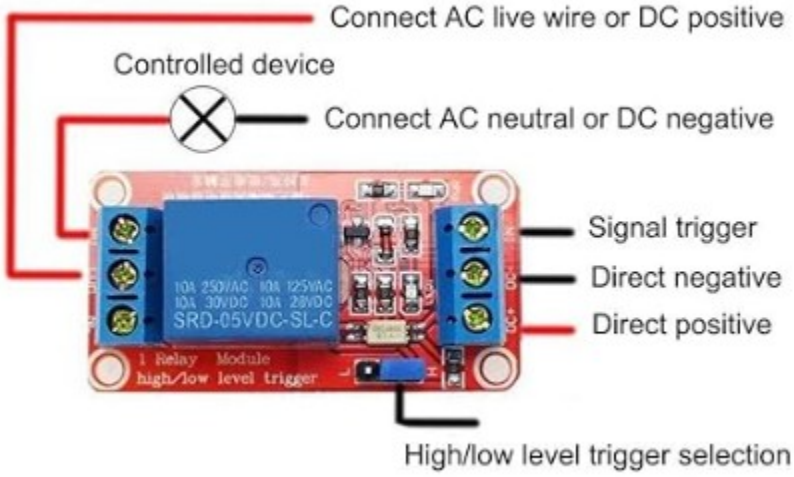




BMP180 Capteur Numérique pour Pression Barométrique, Température et l'Altitude

L’ESP

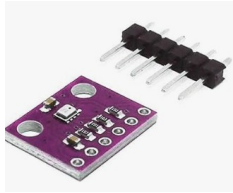
Actionneurs

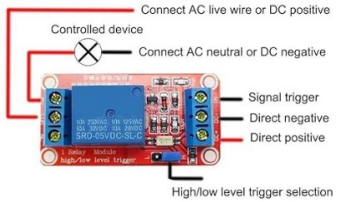


L’ESP

Alimentation

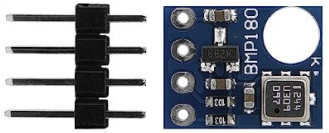
5 V





220V-230V

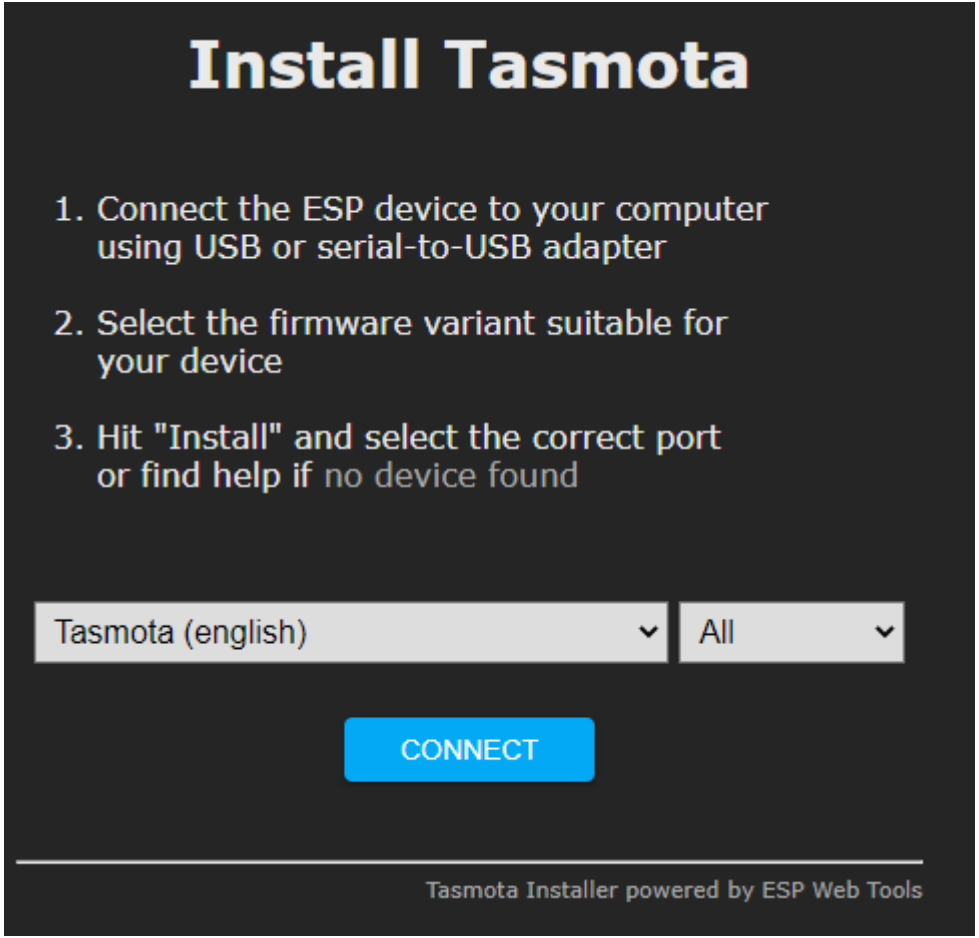
1,8 V à 3,6 V



Préparation de l’ESP

L’ESP: TASMOTA

Tasmota WebInstaller
https://tasmota.github.io/install/



L'ESP: Configuration TASMOTA

ATTENTION inserer dans le champ MQTT de tasmota et node-red : **fablab37110.ddns.net** et ensuite dans le champ "port" mettre **1883** ne pas mettre http://

WIFI

MQTT

Capteurs

Actionneurs

Options

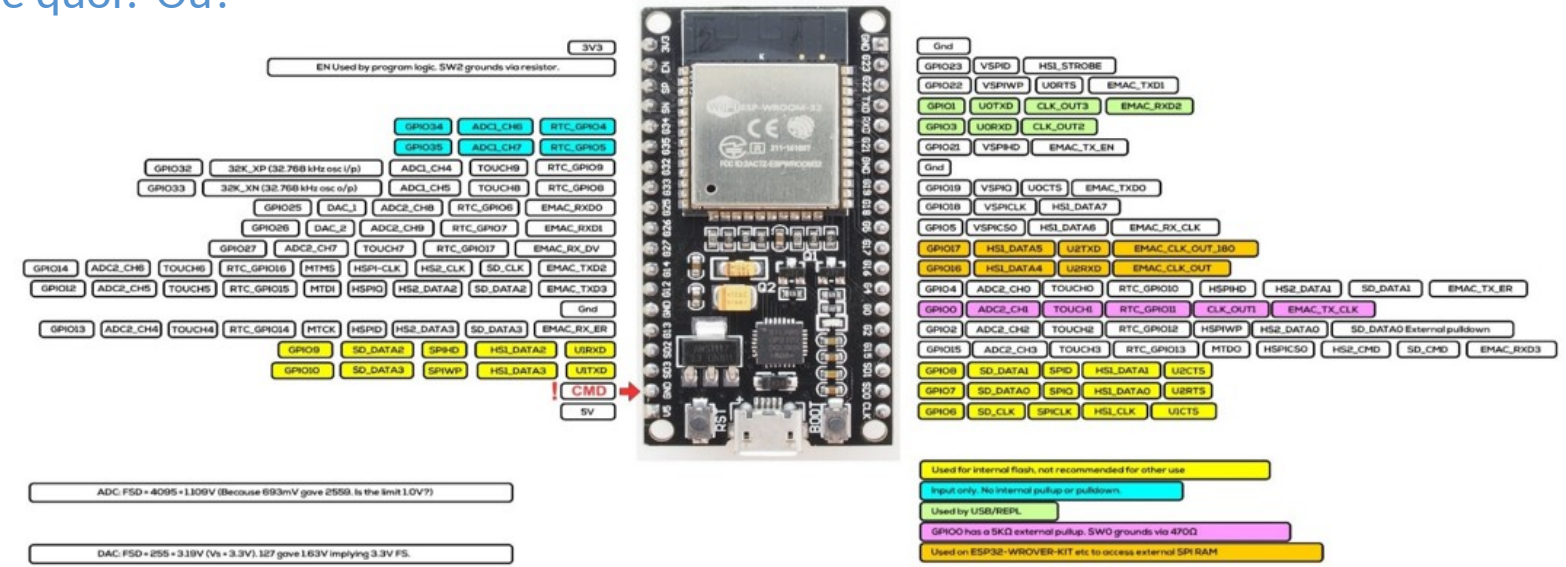
Nouveau serveur de test NodeRed pour l année 2023-2024 :

- fablab37110.ddns.net:1881 Pour Xavier
- fablab37110.ddns.net:1884 Pour Serge
- fablab37110.ddns.net:1885 Pour Christian
- fablab37110.ddns.net:1886 Pour .....
- fablab37110.ddns.net:1887 Pour Fernand
- fablab37110.ddns.net:1888 Pour Patrick
- fablab37110.ddns.net:1889 Pour Jean-Luc
- fablab37110.ddns.net:1890 Pour .....
- fablab37110.ddns.net:1891 Pour .....
- fablab37110.ddns.net:1892 Pour .....

Branchement ESP

L’ESP

On branche quoi? Où?



Value	Expected	Actual	Error %
10	0.13	0.21	2.4
20	0.26	0.33	2.1
127	1.64	1.63	-0.3
200	2.58	2.53	-1.5
240	3.11	3.01	-3
255	3.3	3.19	-3.3

```
Remapping peripherals:
uart = machine.UART(1,baudrate=115200,tx=25,rx=26)
```

ESP32-D2WD is the chip with embedded 2MB flash and the internal flash is connected to different pins (GPIO16, GPIO17, SD_CMD, SD_CLK, SD_DATA_0 and SD_DATA_1)

Dashboard de test

Dashboard de test (Node-Red)

Visualiser tous les capteurs

Bouton pour tester les actionneurs

Dashboard de Production

Dashboard de production (Node-Red)

Visualiser certaines données

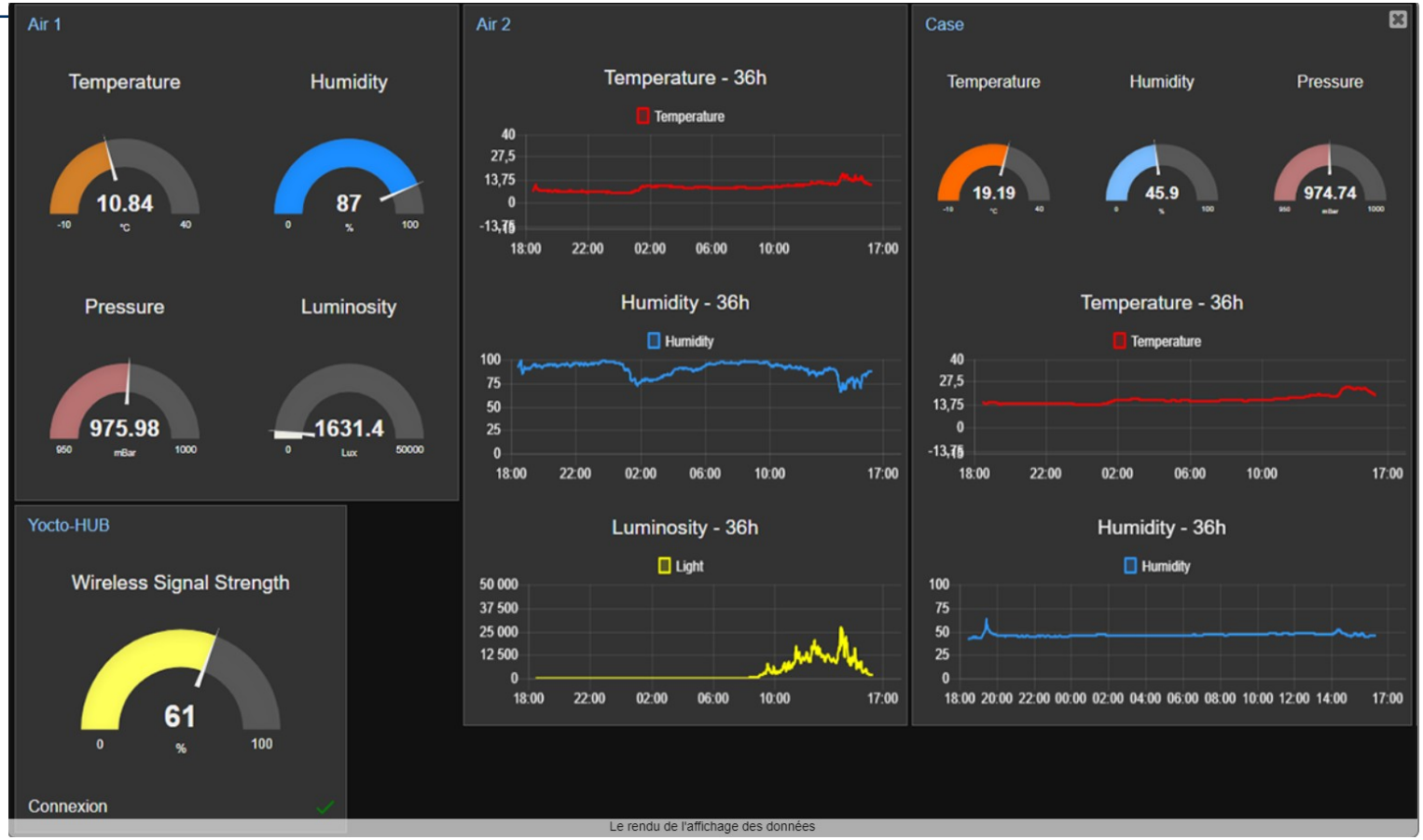
Fonctions automatiques

Paramétrage/Administration/tests

Logs

Dashboard de production (Node-Red)

Dashboard de production (Node-Red)



Le rendu de l'affichage des données

A vous de jouer