

# node-red

Instalar node-RED:

- Windows [link](#)
- Raspberry Pi [link](#)

## Node-RED

Engregar node-RED: `node-red -v`  
AutoStart en linux [link](#)

Afegir nodes:

`Node-red-contrib-blynk-ws`

`Node-red-contrib-influxdb`

`Node-red-contrib-thingspeak42`

`Node-red-dashboard`

`Node-red-node-darksky`

`Node-red-node-dweetio`

`Node-red-contrib-s7`

`node-red-contrib-bigtimer`

`Node-red-contrib-blynk-ws`

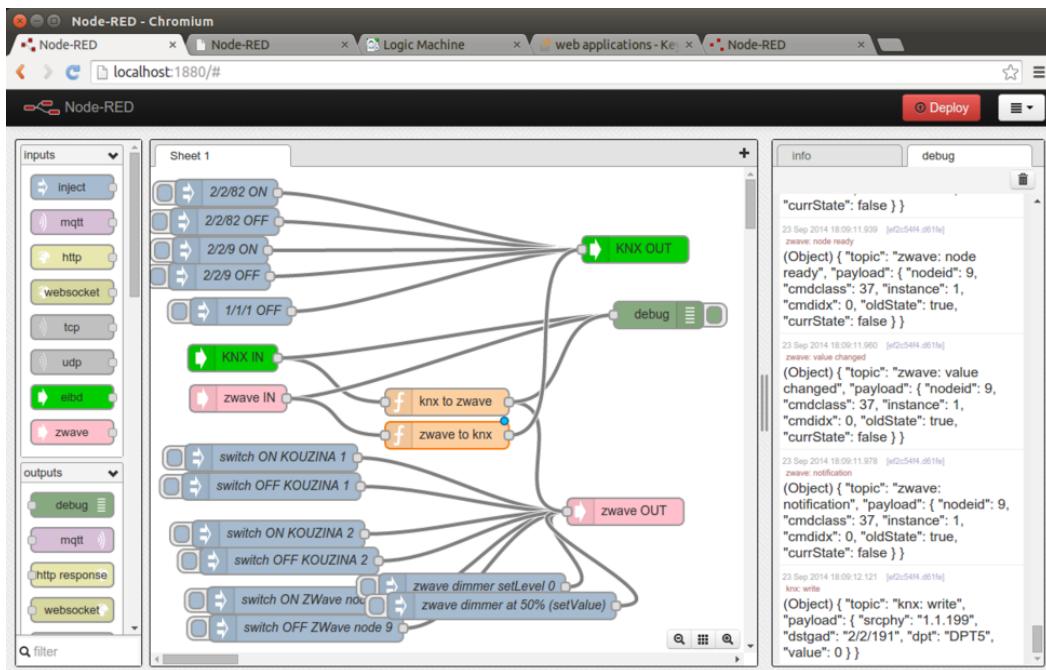
`node-red-contrib-s7`

# node-red

Node-RED és una eina de programari desenvolupada per l'empresa IBM que permet connectar dispositius físics en l'anomenat IoT

**Node-RED**

Programació visual mitjançant els anomenats FLOWS



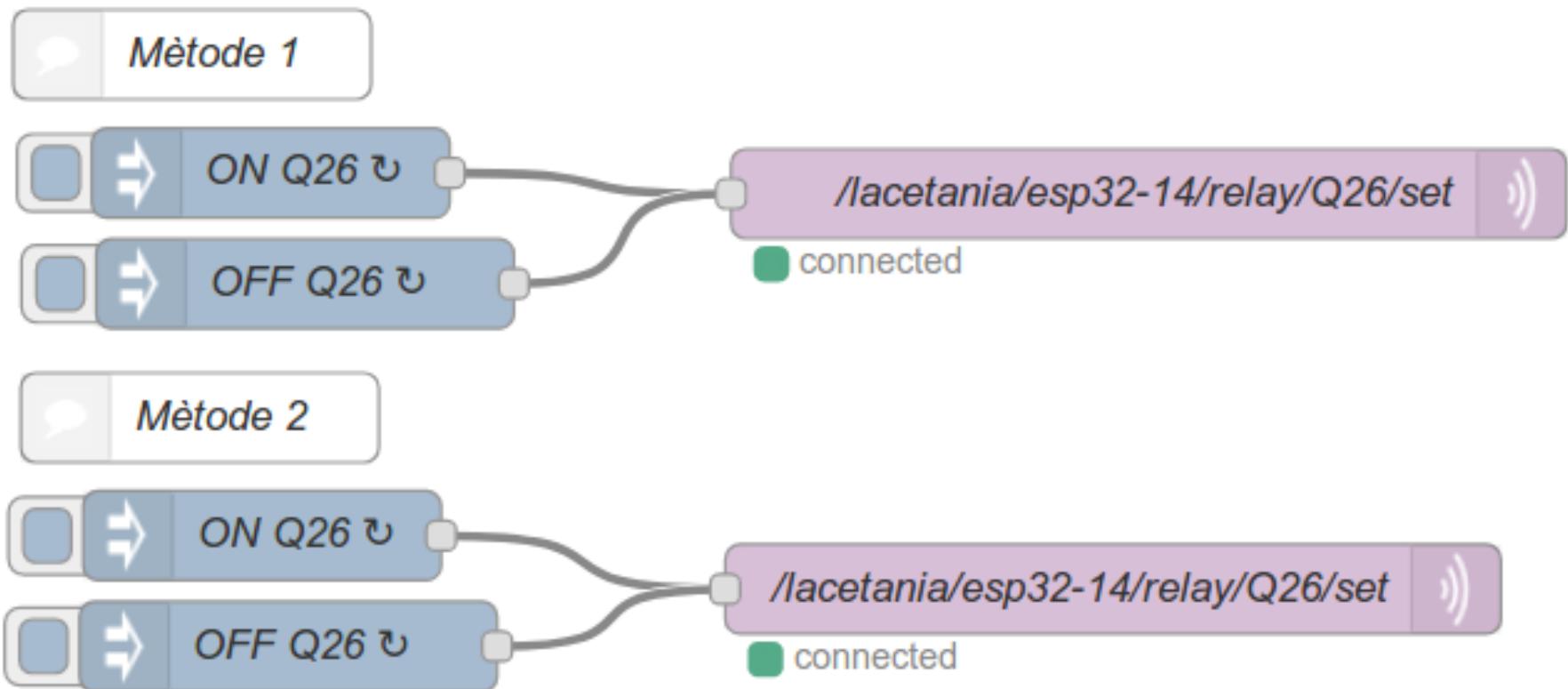
És tracta d'una plataforma monousuari, cal que cada alumne se l'instal·li al seu ordinador

# Intermitència



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# Interruptor horari

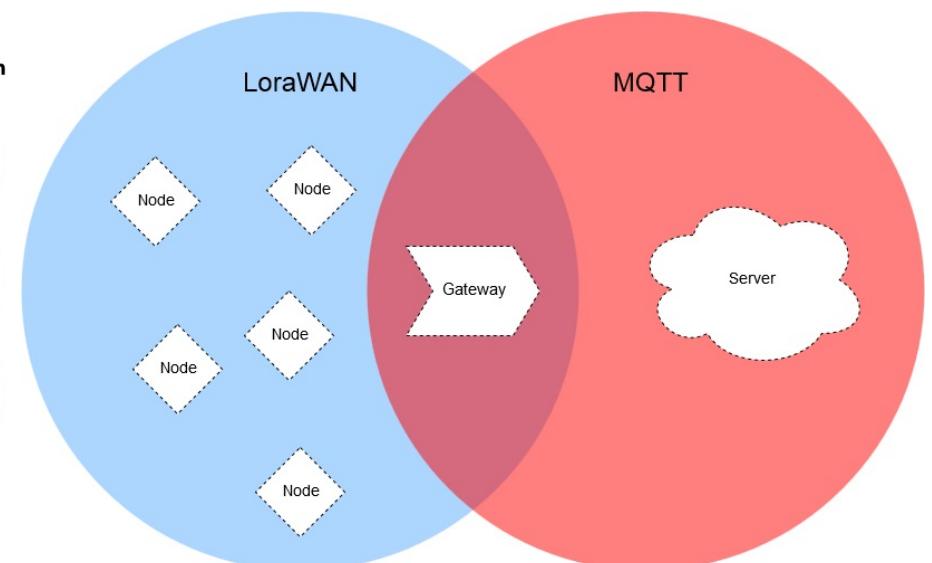
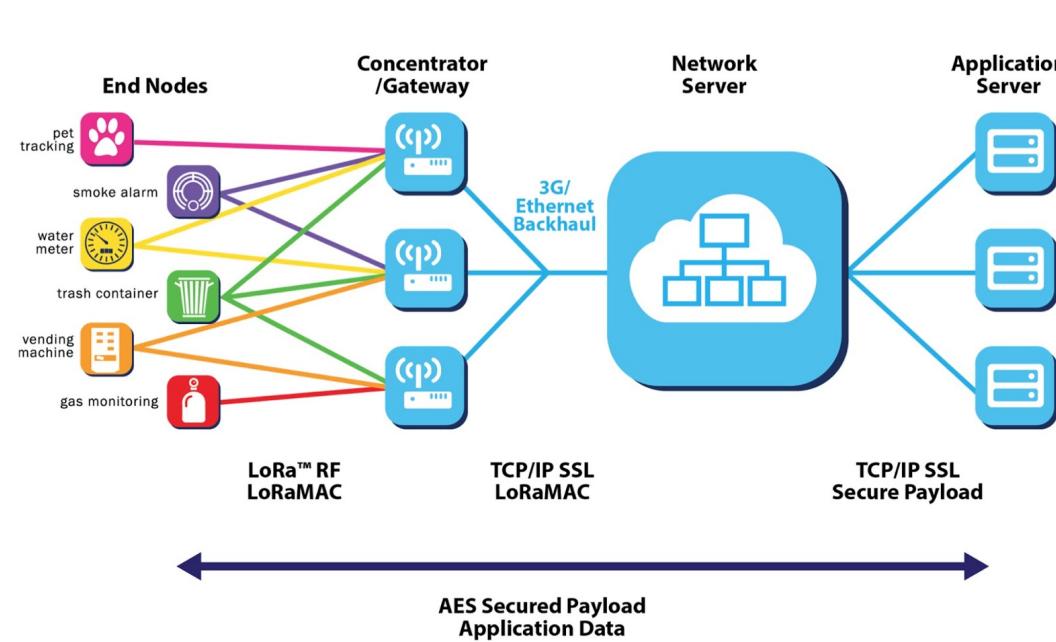
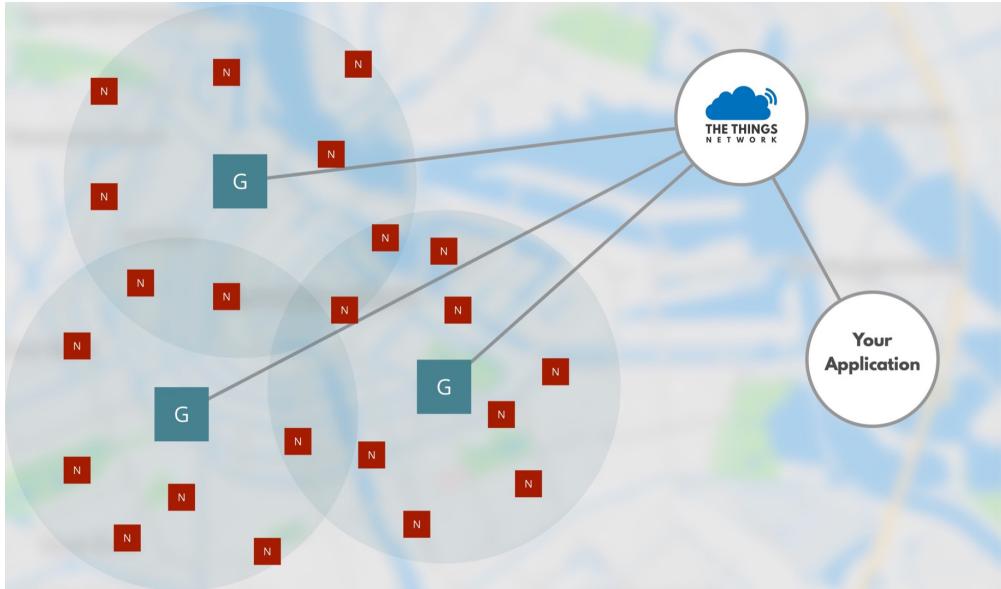


# Interruptor horari

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```

# LORA, LORAWAN

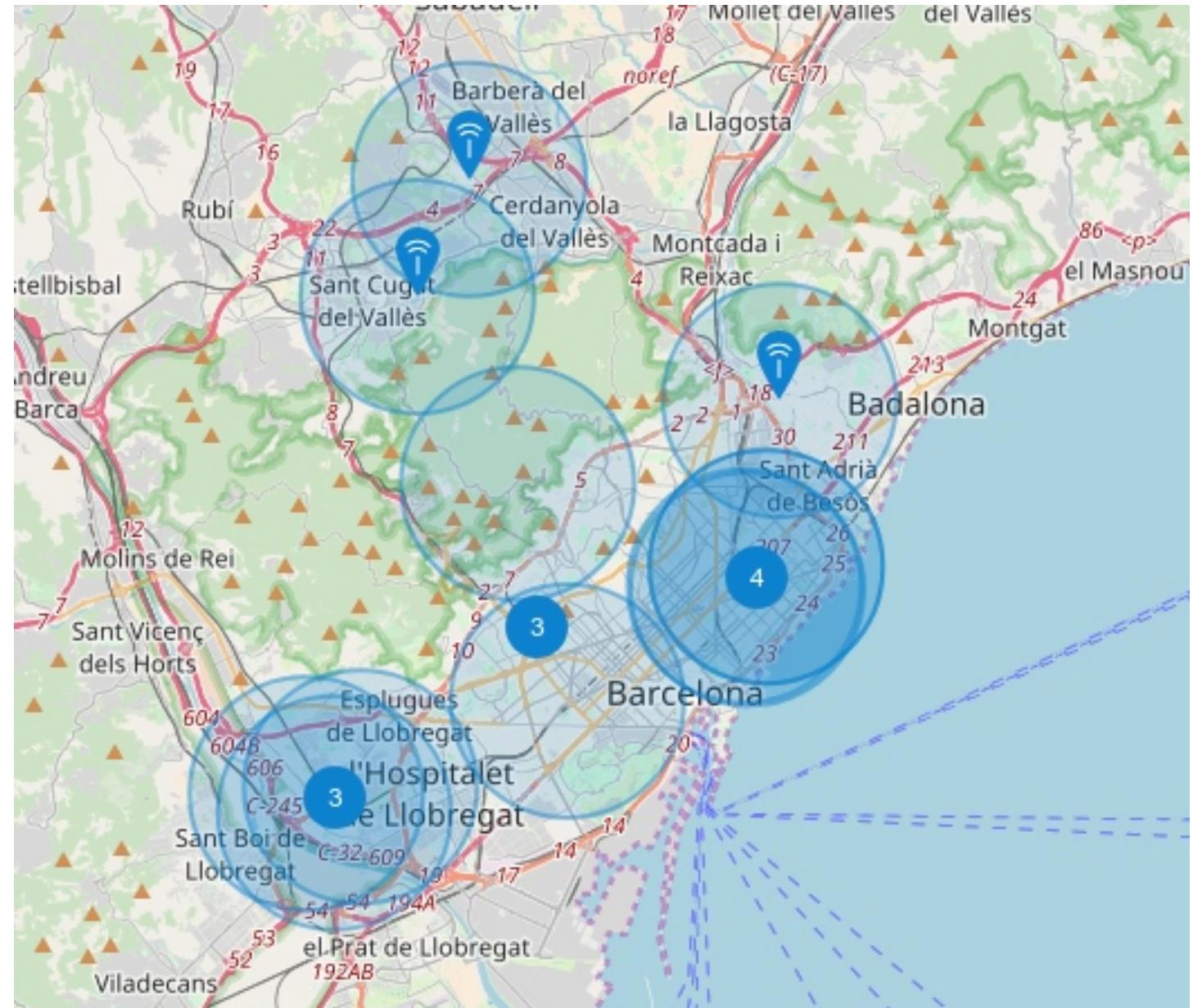
## LONG RANGE RADIO, LORA WIDE AREA NETWORK





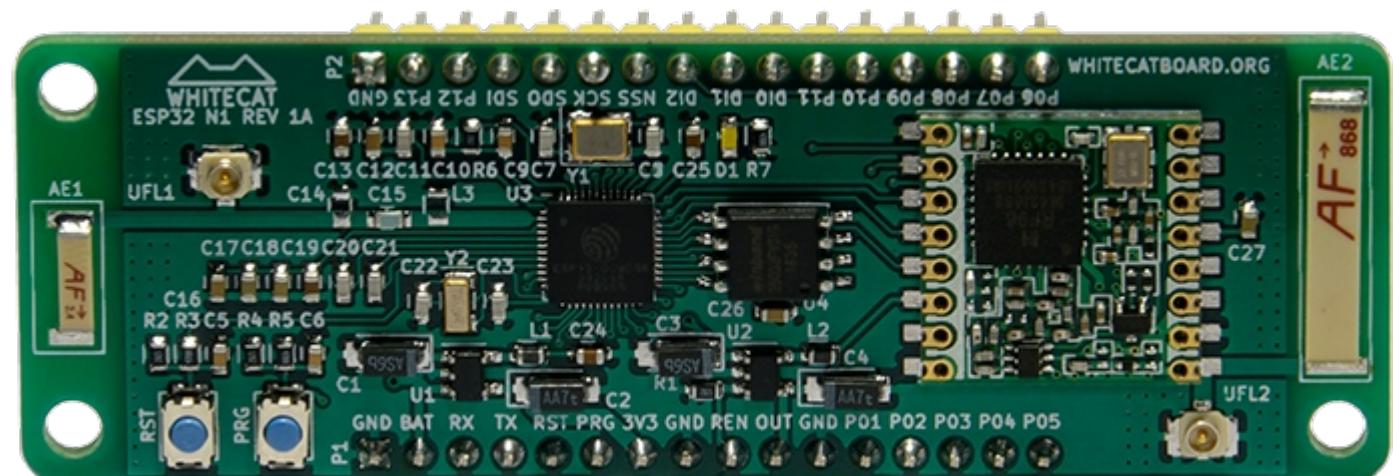
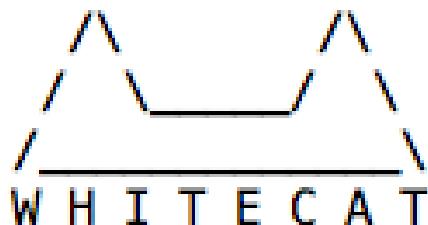
THE THINGS  
NETWORK

# THE THINGS NETWORK



# WHITECATBOARD

WIFI + LORA + BLUETOOTH



```
when board starts
do repeat while true
do set digital pin P6 - GPIO26 to high
  wait 150 milliseconds
  set digital pin P6 - GPIO26 to low
  wait 150 milliseconds
```

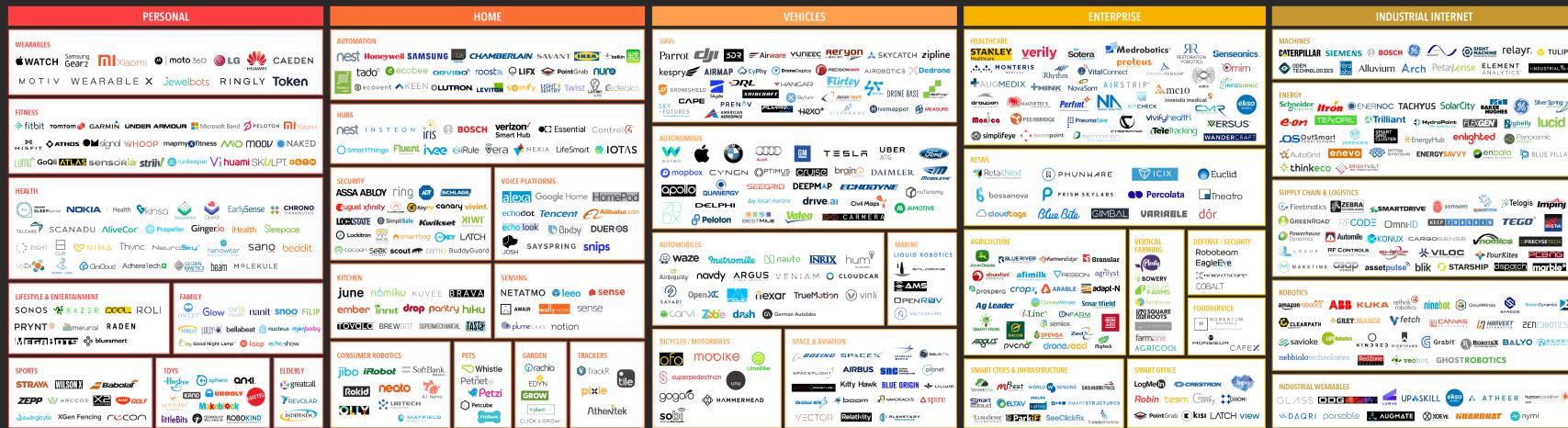
The interface includes a toolbar with icons for delete, comments, file, save, and various control blocks. A sidebar menu lists categories: Events, Control, Operators, Lists, Variables, Functions, Input / Output, Communications, Sensors, Actuators, Network, Wi-Fi, LoRa, and MQTT. Two main code blocks are shown:

- "when a message is received to topic `“ ”` with QOS0 with: length, payload" (with a receive message icon)
- "publish `“ ”` to topic `“ ”` with QOS0" (with a publish message icon)"

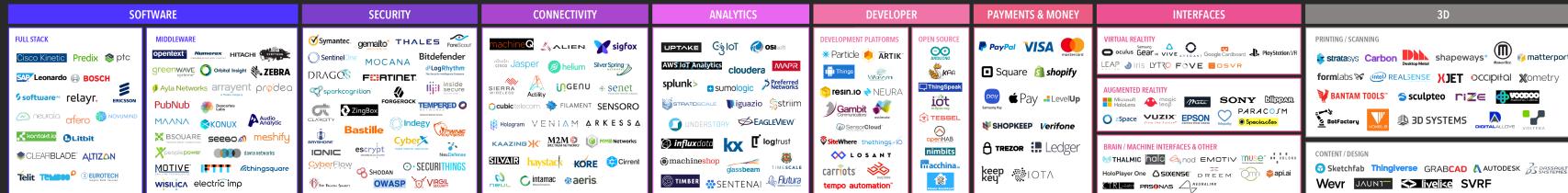
# COMPANIES IOT

## Internet of Things Landscape 2018

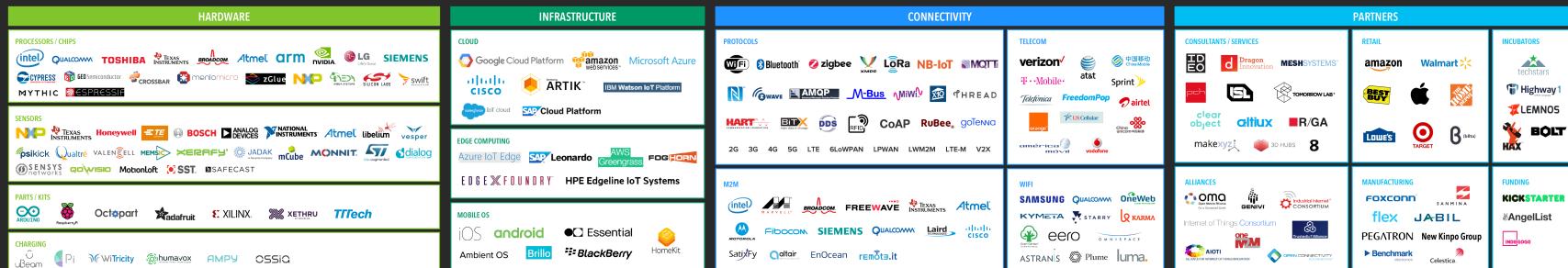
### APPLICATIONS (VERTICALS)



### PLATFORMS (HORIZONTALS)



### BUILDING BLOCKS



© Matt Turck (@mattturck), Demi Obayomi (@demi\_obayomi) & FirstMark Capital (@firstmarkcap)

Final version, revised and updated as of February 7, 2018

FIRST MARK  
EARLY STAGE VENTURE CAPITAL

[Link document original](#)

# SENSORS

- ✓ Sensor de pols
- ✓ Sensor de qualitat de l'aire
- ✓ Sensor de gas
- ✓ Sensor de gas
- ✓ Sensor d'alcohol
- ✓ Sensor de pH
- ✓ Sensor de pluja
- ✓ Sensor de pluja
- ✓ Sensor nivell d'aigua
- ✓ Sensor de temperatura i d'humitat hambiental
- ✓ Sensor de temperatura submergible
- ✓ Sensor d'humitat del terra
- ✓ Sensor d'humitat del terra
- ✓ Sensor de distància
- ✓ Sensor de distància



# BLYNK APP

smartHome

EX 7

Q13 Q13 Q0 Q2 Q15 Q15

OFF OFF OFF OFF

I5 I4 I14 I12

Type here

TERMINAL

Type here

IoT-01

D3 D7 A3 D9

Q3 Q7 QA3 Q9

I2 Q3 I8 Q7 IA1 QA3 IA2 Q9

TEMP HUM

24 55

Q5 SLIDER V22: 40 Q6

D5 D6

TAB 1 TAB 2

smartHome

EX 7

OFF OFF OFF OFF

Q13 Q13 Q0 Q2 Q15 Q15

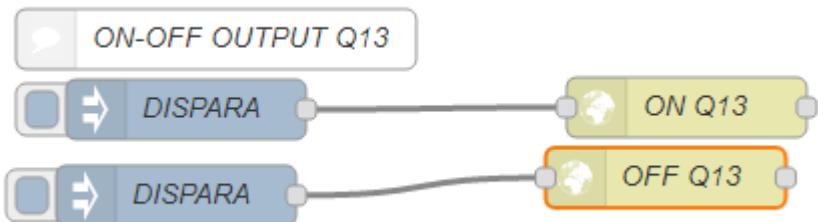
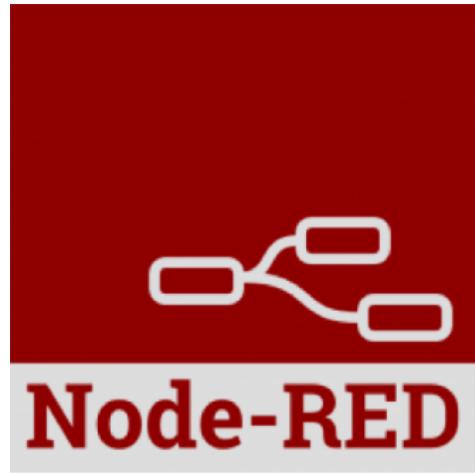
OFF OFF OFF OFF

I5 I4 I14 I12

Type here

TERMINAL

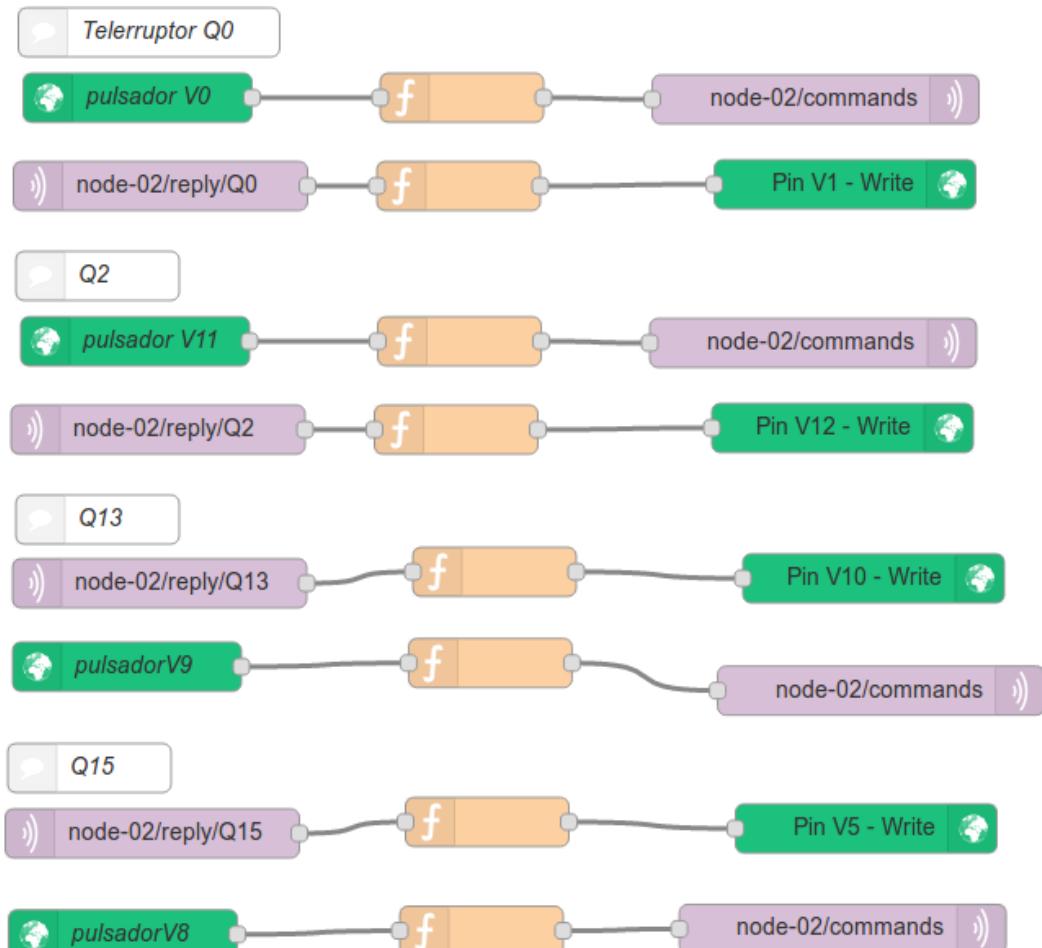
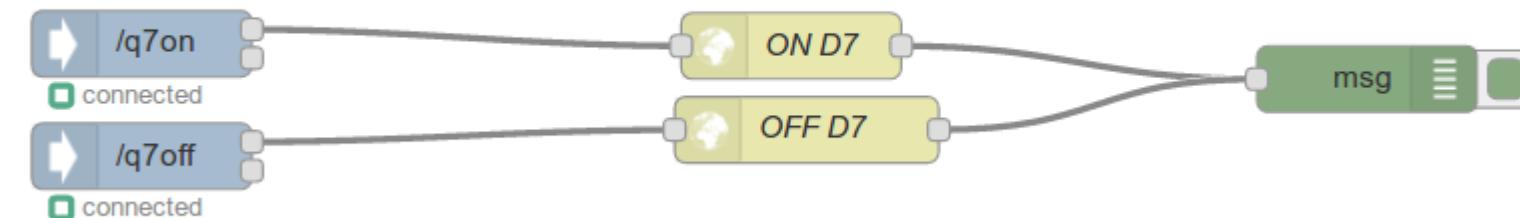
Type here

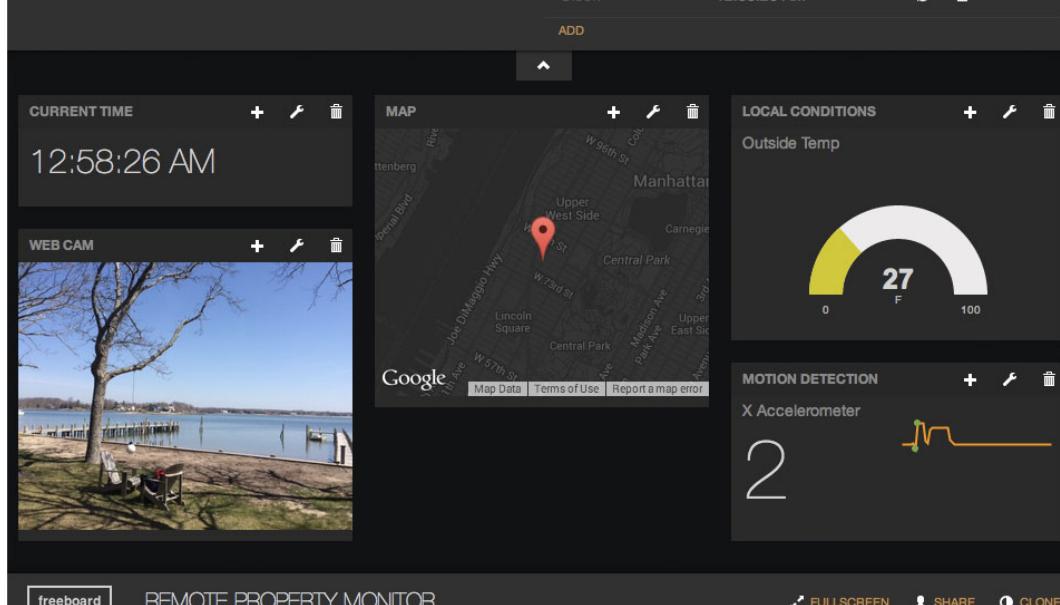
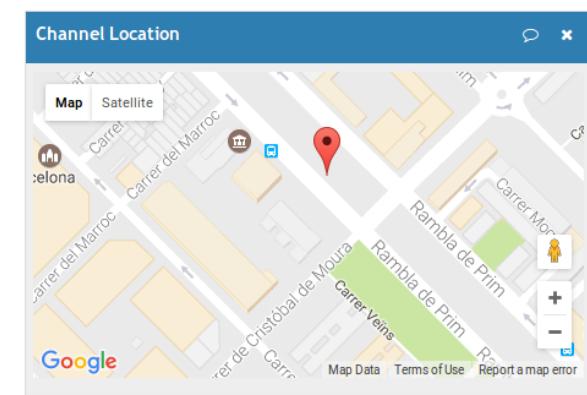
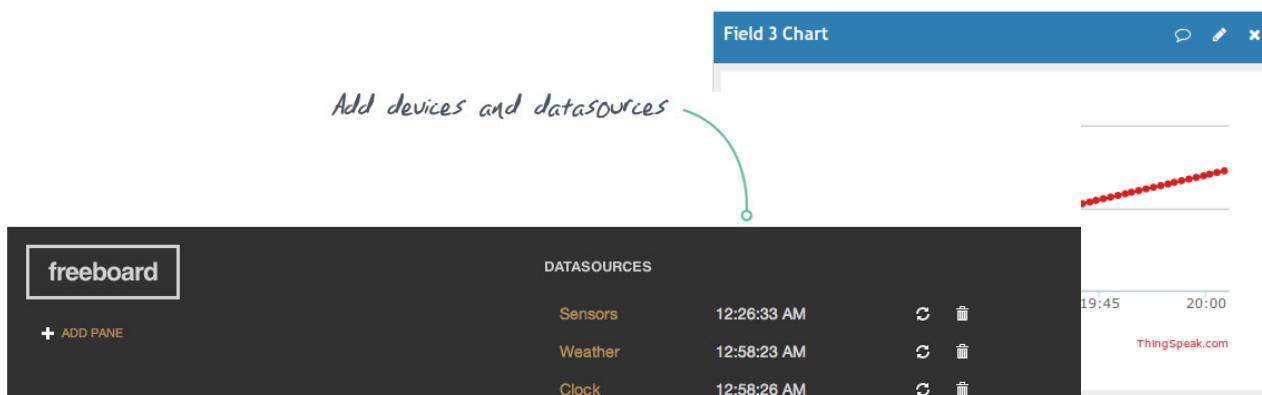
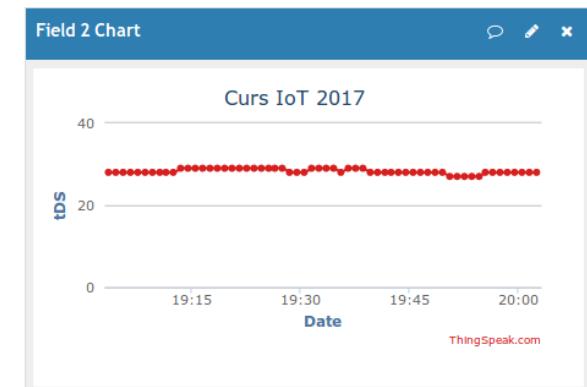
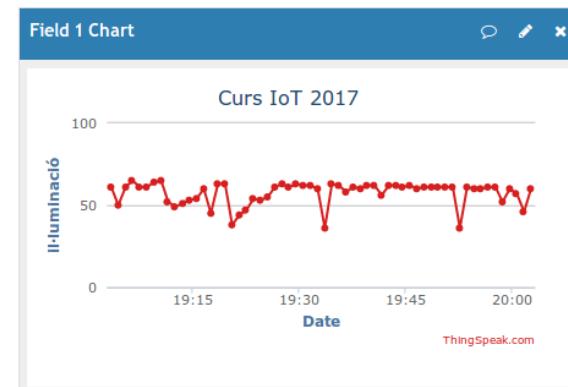


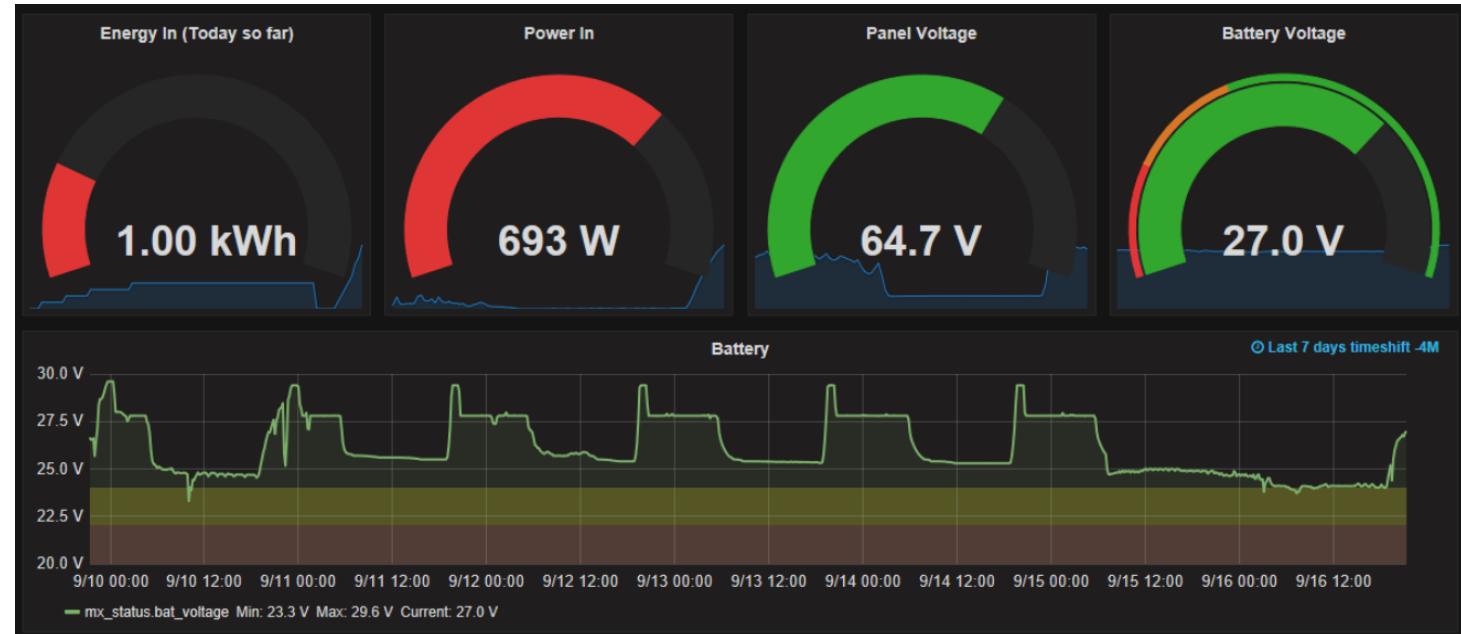
INTERMITÊNCIA OUTPUT Q15



ON-OFF Q7 telegram





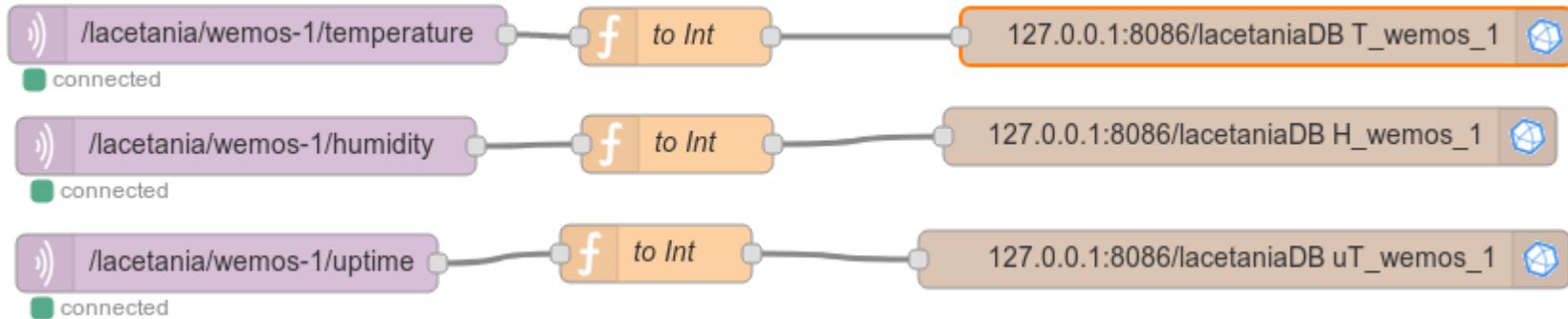


# Influxdb

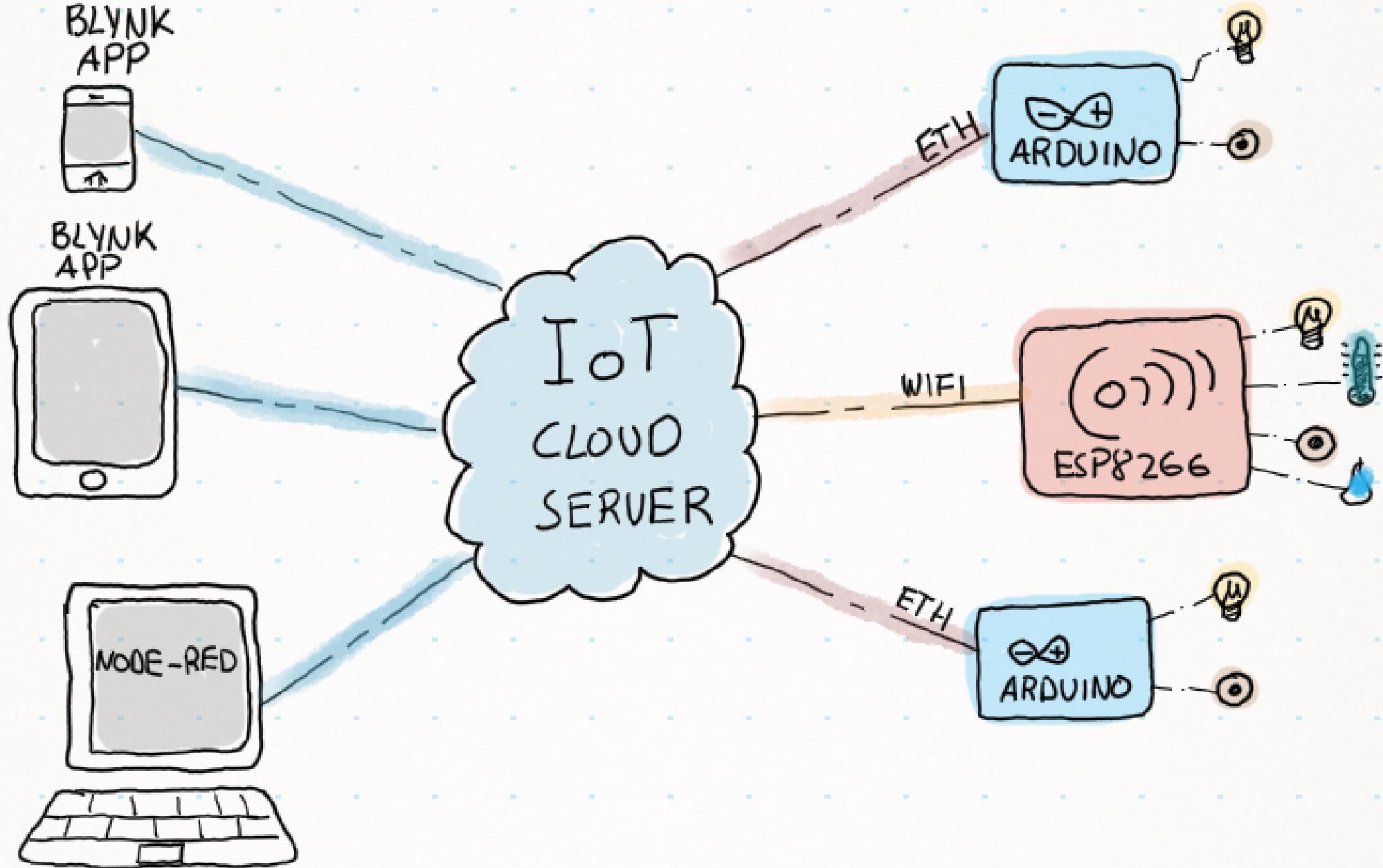
```
ssh pi@192.168.100.xxx #per entrar al servidor
```

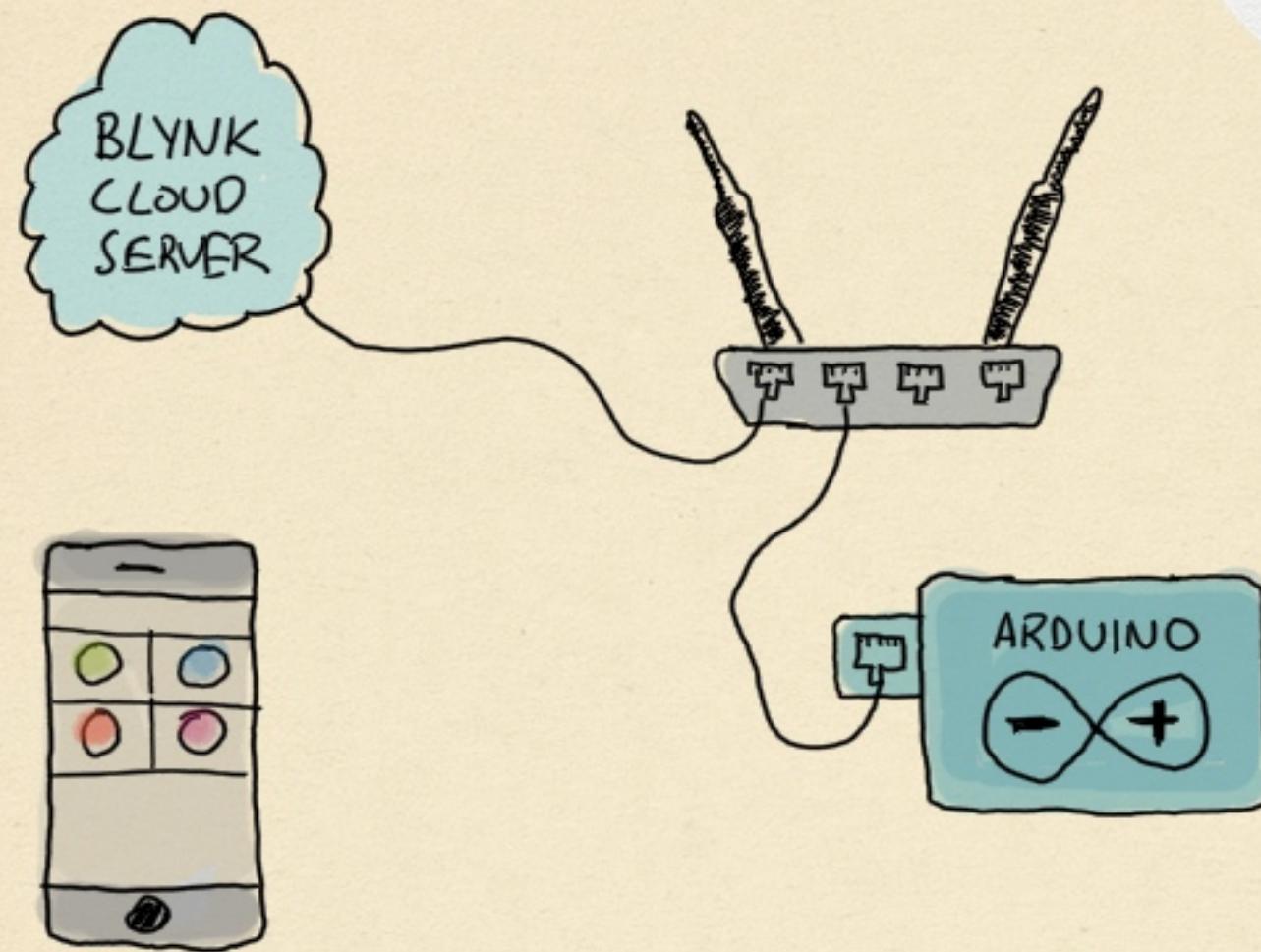
```
influx -precision rfc3339
create database lacetaniaDB
show databases
use lacetaniaDB
insert T_aula_1 value=25
insert T_aula_1 value=26
insert T_aula_1 value=27
insert H_aula_1 value=97
insert H_aula_1 value=98
select * from T_aula_1 #per veure recull de mesures
select * from H_aula_1

#per esborrar una taula
drop database lacetaniaDB
#per sortir
exit
```

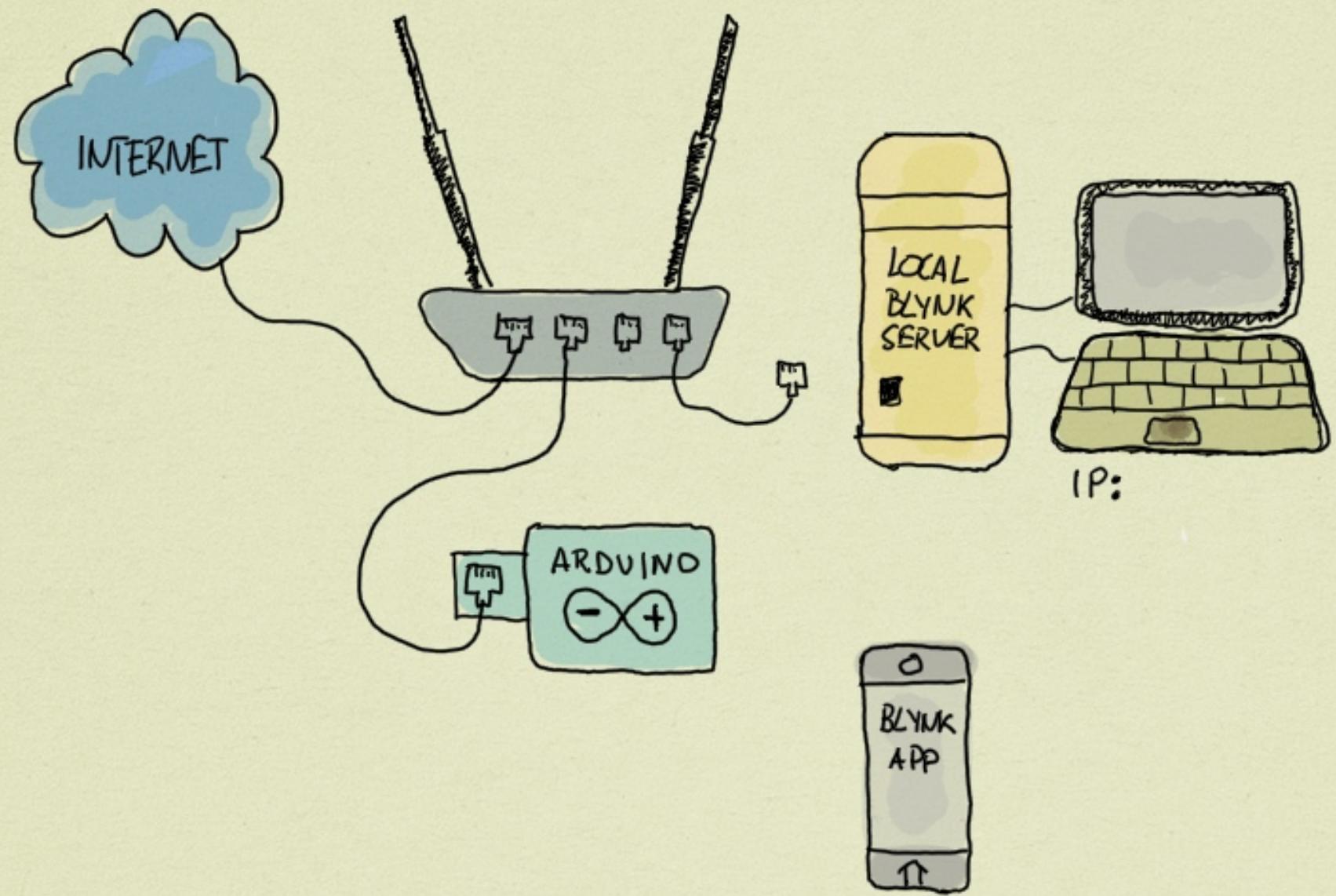


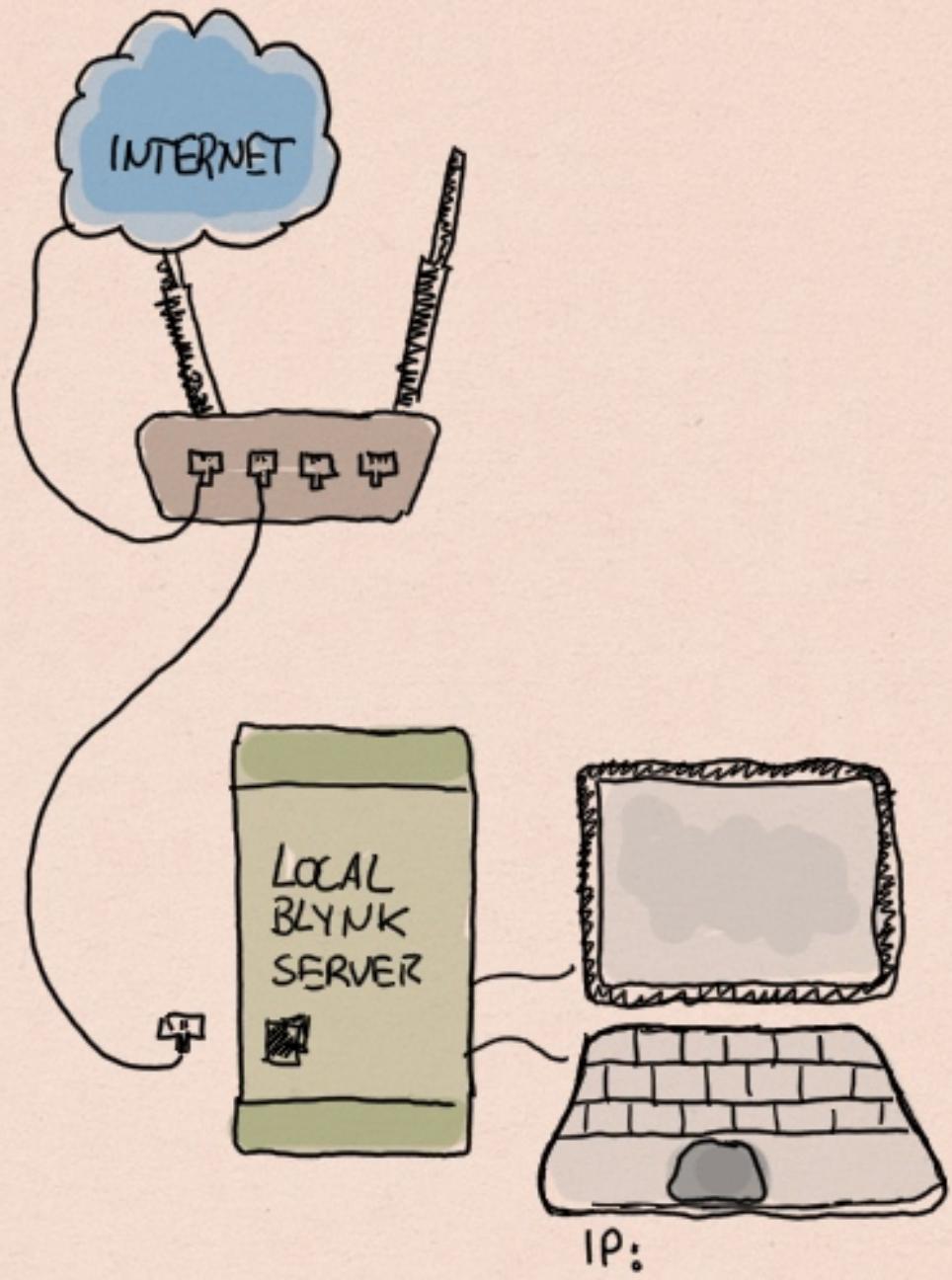
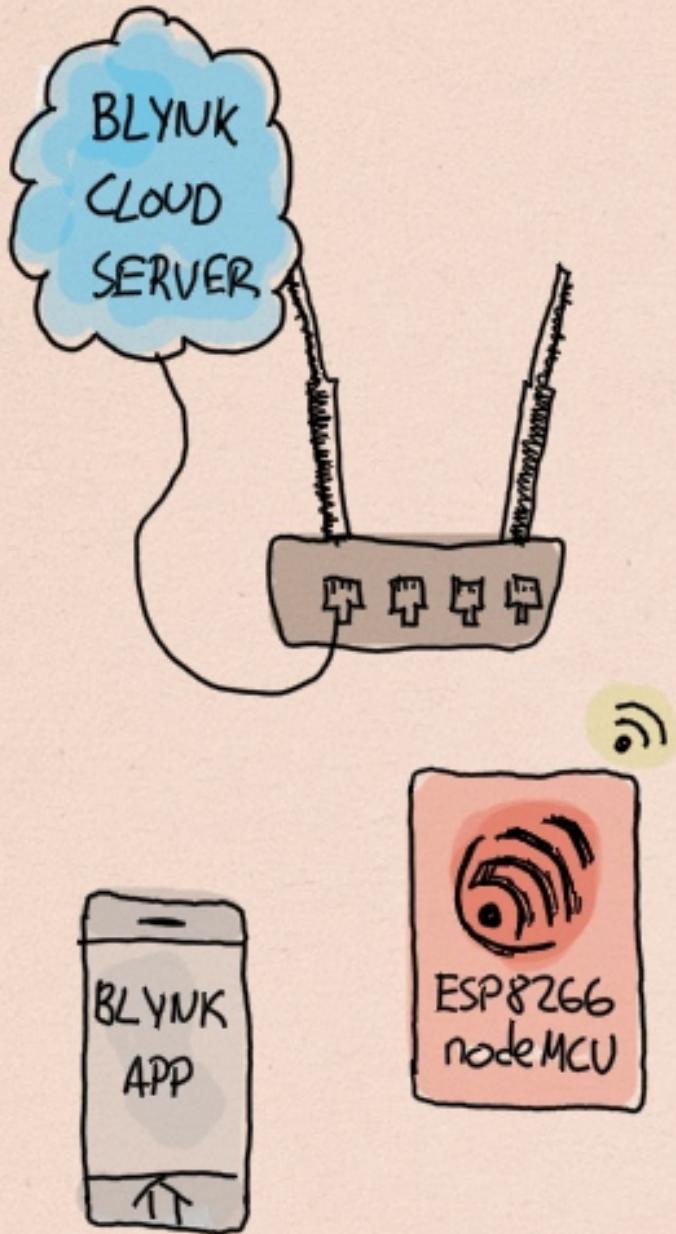
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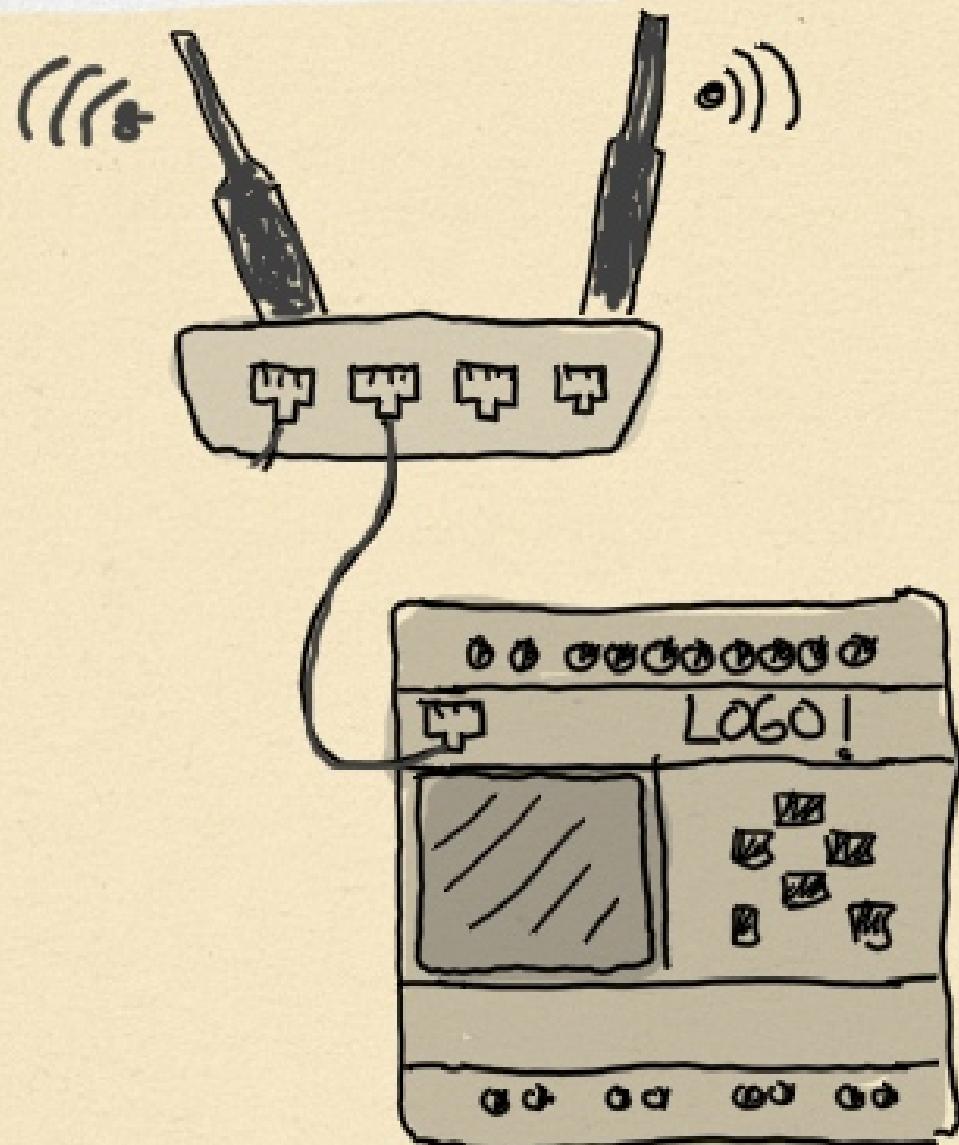
© JAUME NOGUÉS

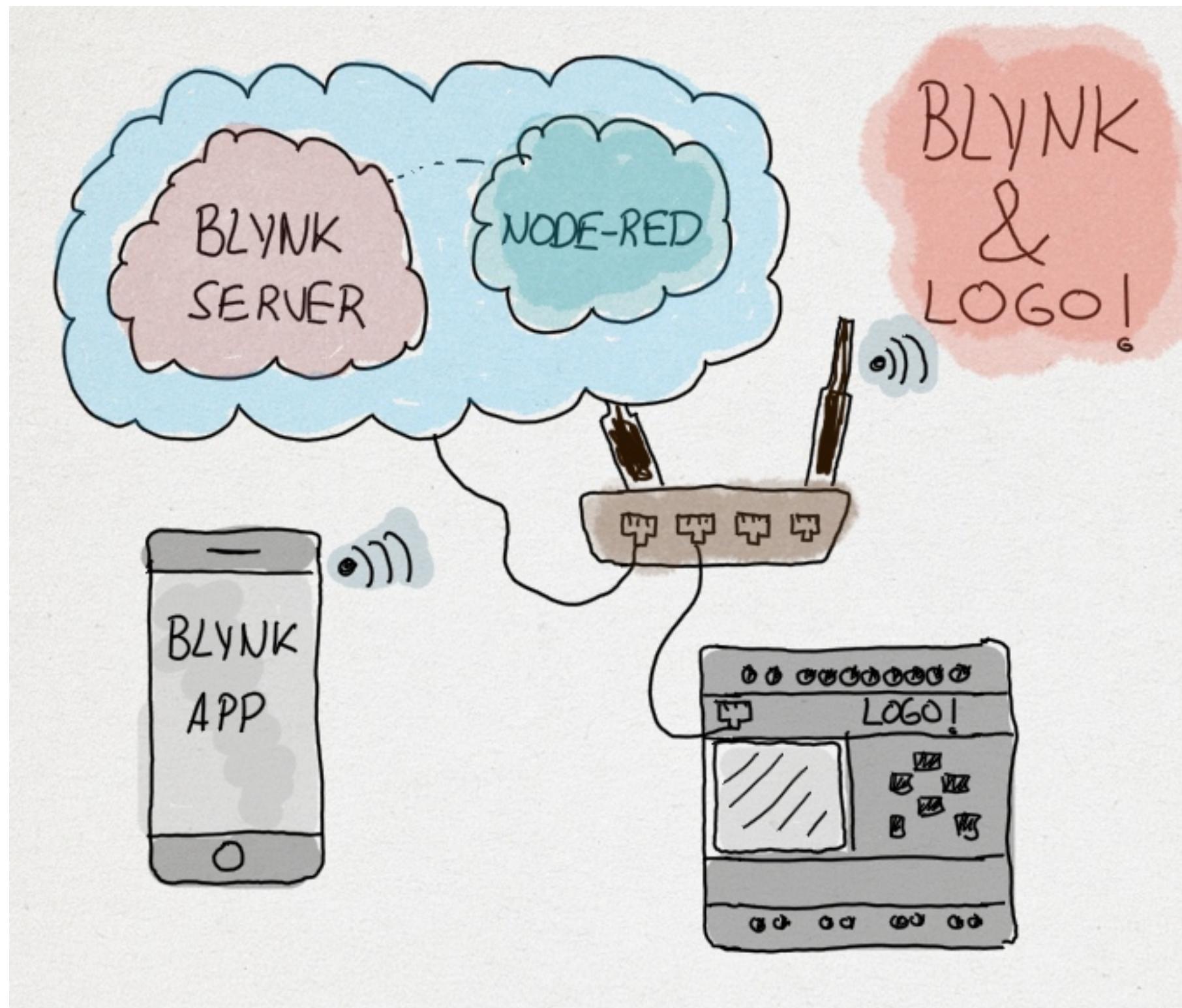


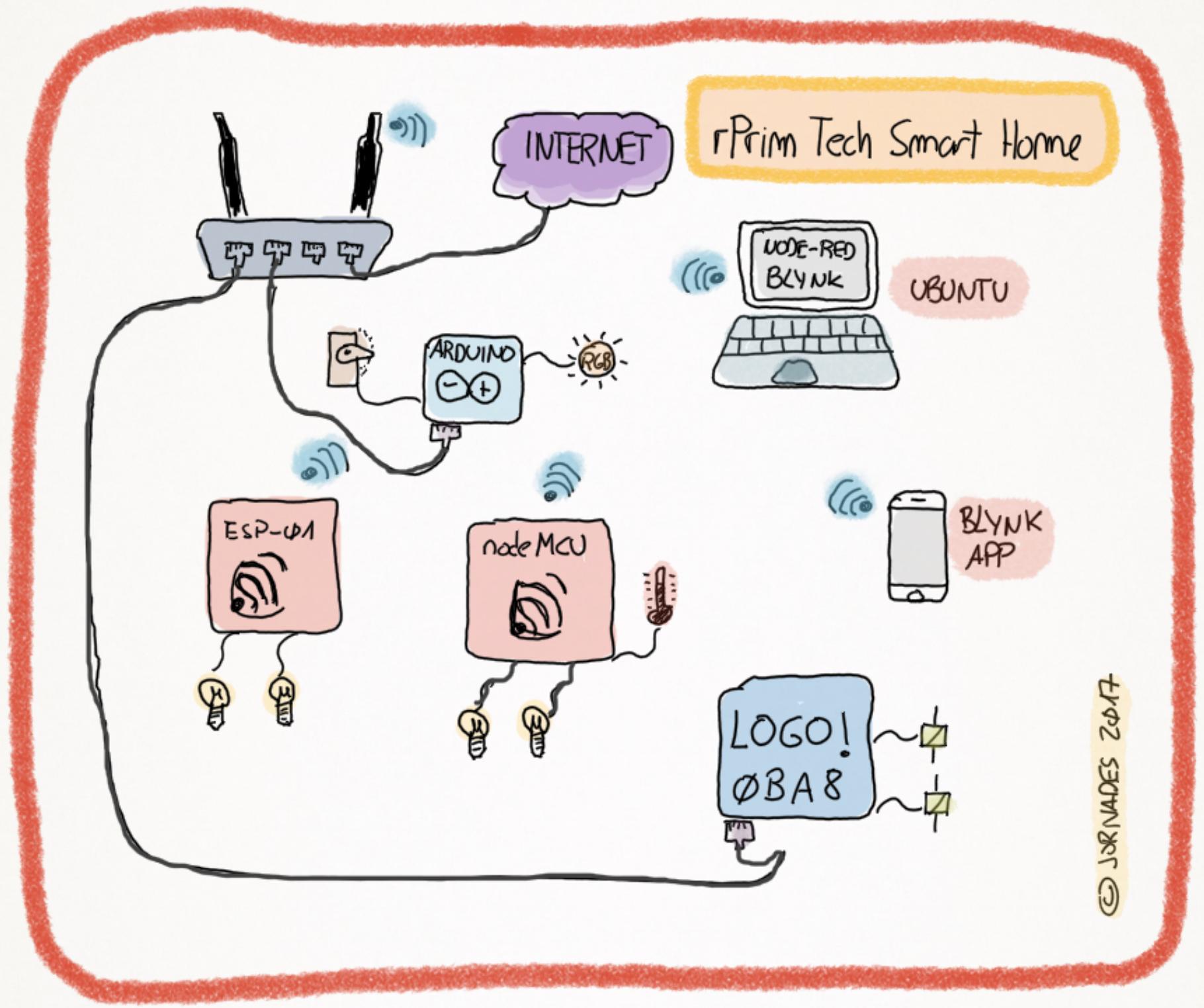




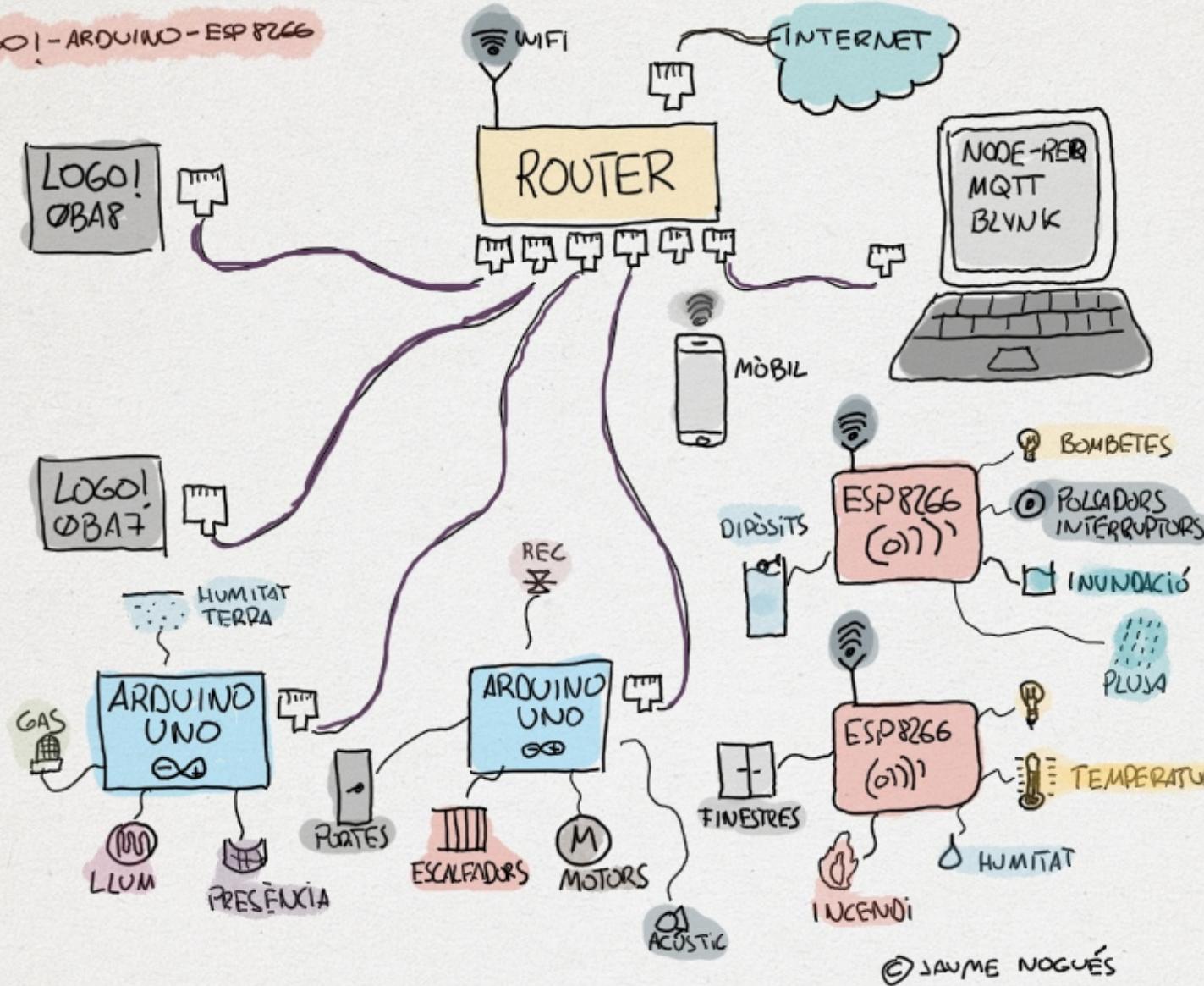
ESP8266

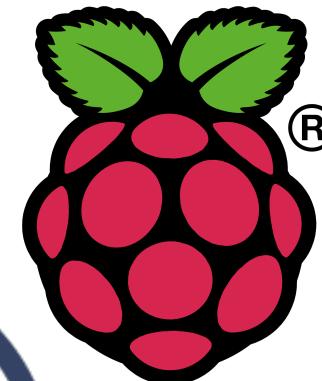






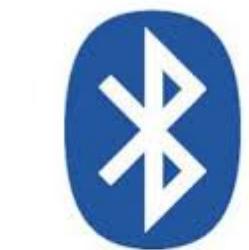
LOGO! - ARDUINO - ESP 8266



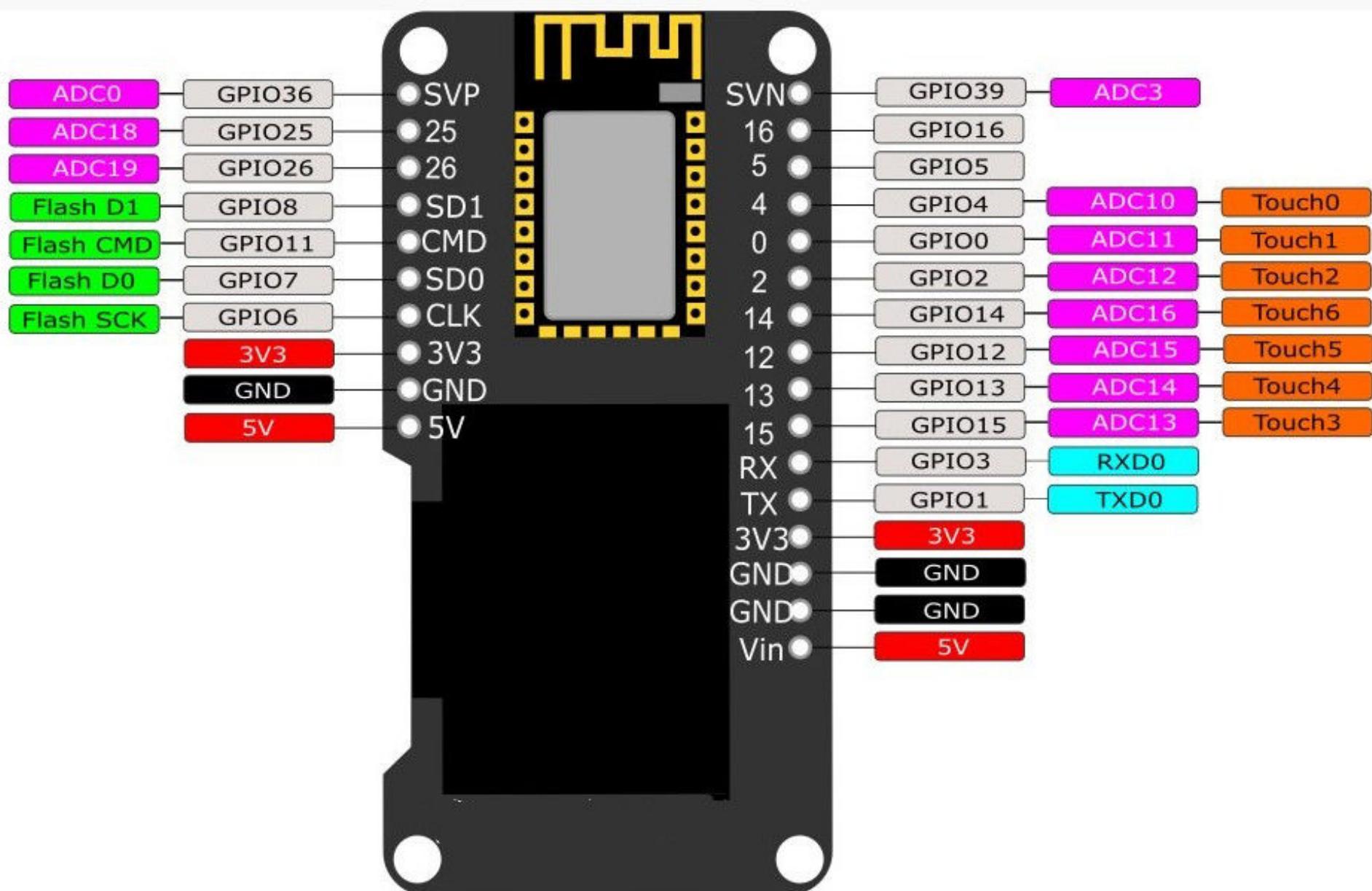


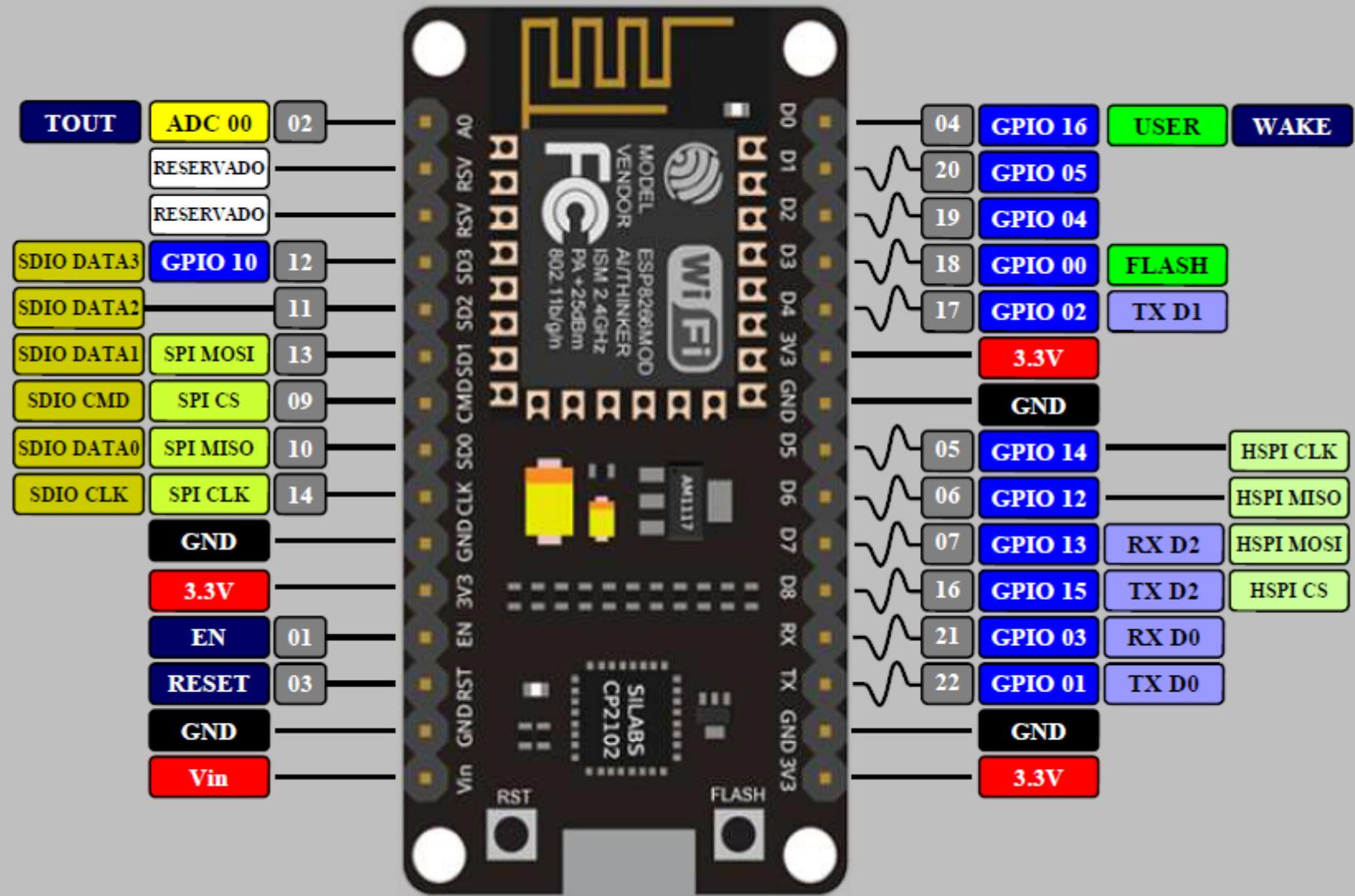


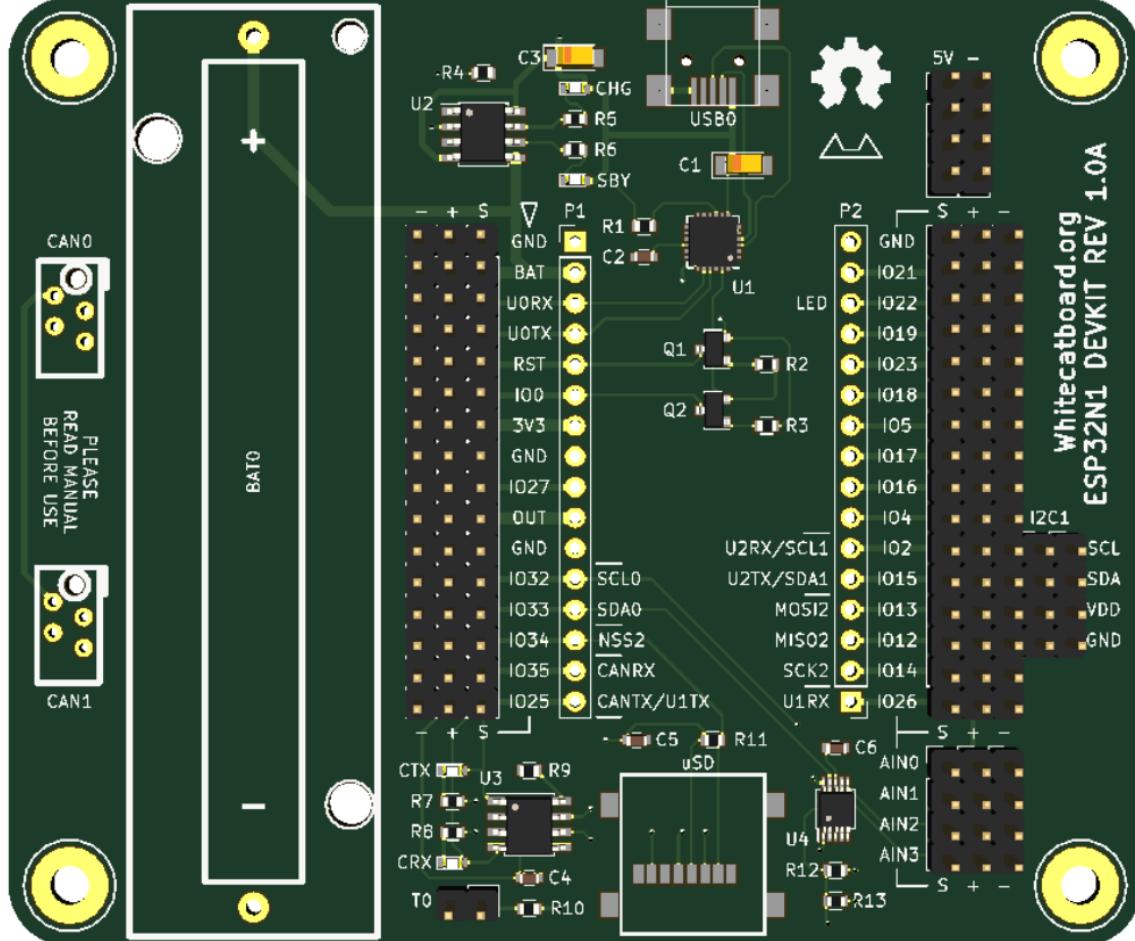
Particle



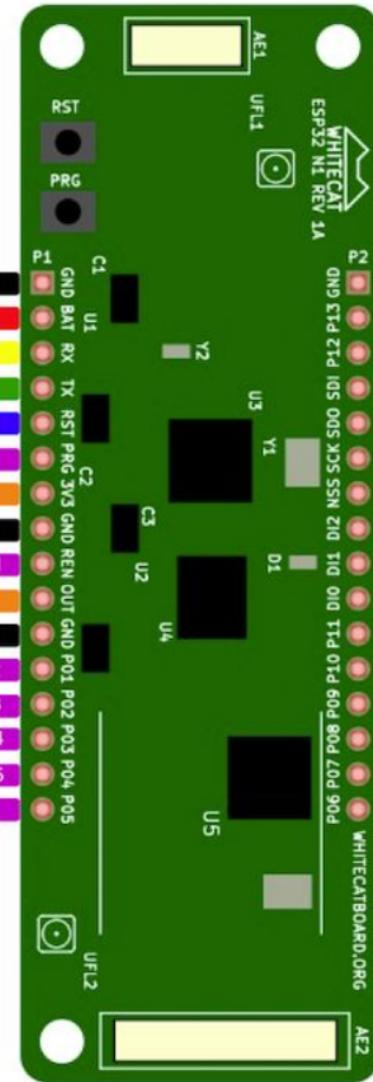
Bluetooth®







GROUND
VIN 0 - 5.5V
U0RX
U0TX
RST
I00
3V3
GND
I027
OUT
GND
I032
SCL0
I033
SDA0
I034
NSS2
I035
CANRX
I025
CANTX/U1TX
CTX
U3
R7
R8
CRX
T0
U2RX/SCL1
U2TX/SDA1
I021
I022
I019
I023
I018
I05
I017
I016
I04
I02
I015
I013
MOSI2
I012
SCK2
I014
I026
U1RX
C6
AIN0
AIN1
AIN2
AIN3
SCL
SDA
VDD
GND



# RPi2

User:pi password:raspberry

IP: 192.168.100.222

Node-RED, port:1880 u:pi password:raspberry

Mosquitto, port:1883 u:pi password:raspberry

Grafana, port:3000 u:admin password:admin

u:pi password:raspberry

Influxdb, port:8086 u:admin password:admin

GRÀCIES PER LA VOSTRA ASSISTÈNCIA



JNOGUES@GMAIL.COM



[HTTP://RPRIMTECH.TK](http://RPRIMTECH.TK)

INS RAMBLA PRIM

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