

The background features a light blue and white color scheme. It is filled with various icons representing different types of IoT devices and systems, including a bicycle, a car, a house, a train, a light bulb, a speaker, a clock, a bus, a television, a telephone, a fan, a potted plant, a calculator, a bicycle, a car, a house, a train, a light bulb, a speaker, a clock, a bus, a television, a telephone, a fan, a potted plant, a calculator, and a bicycle. The words "INTERNET OF THINGS" are written in large, light blue, sans-serif capital letters across the center of the image.

# Uso de IoT servers con MicroPython

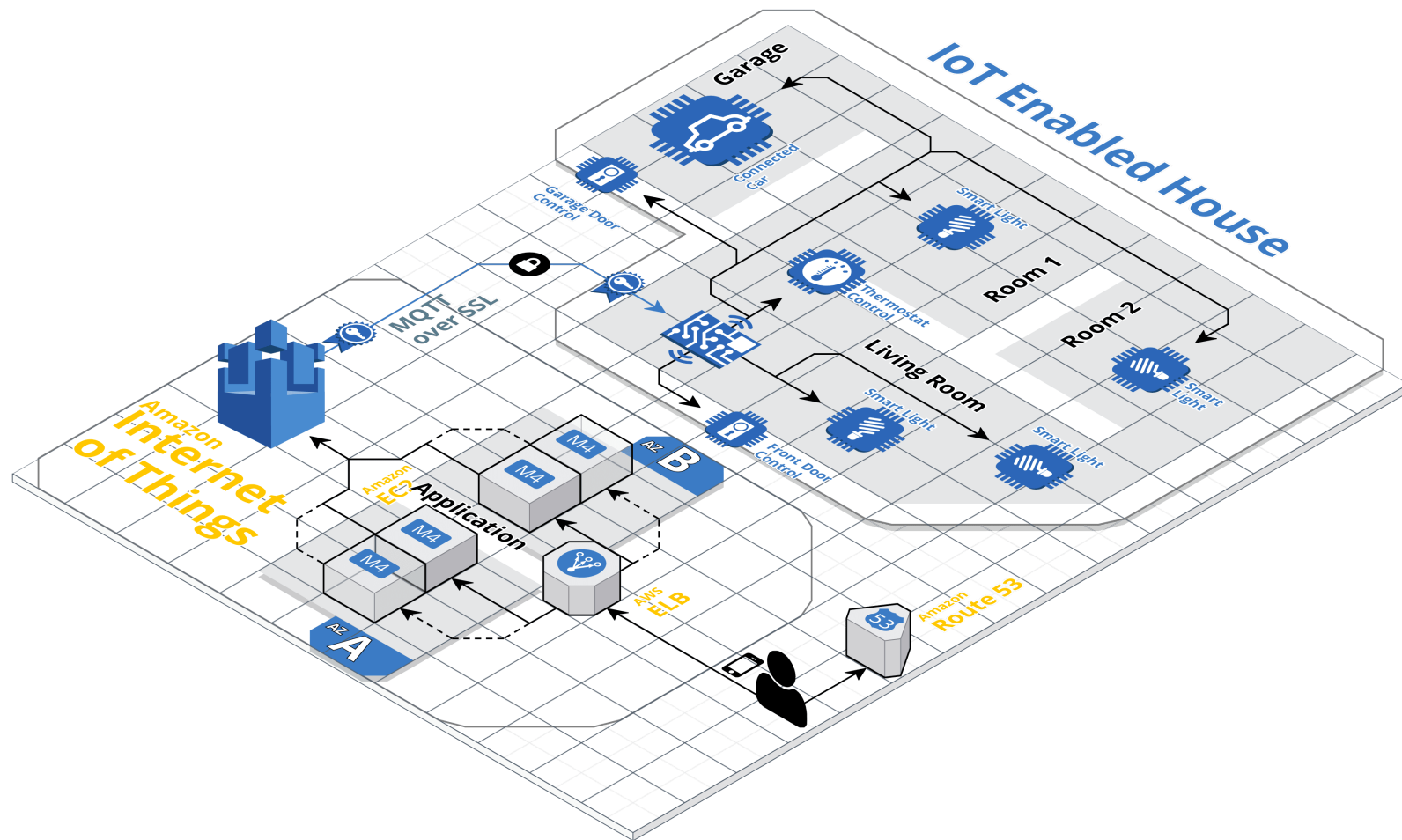
## Ponentes:

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- Steven Silva



Fun Python

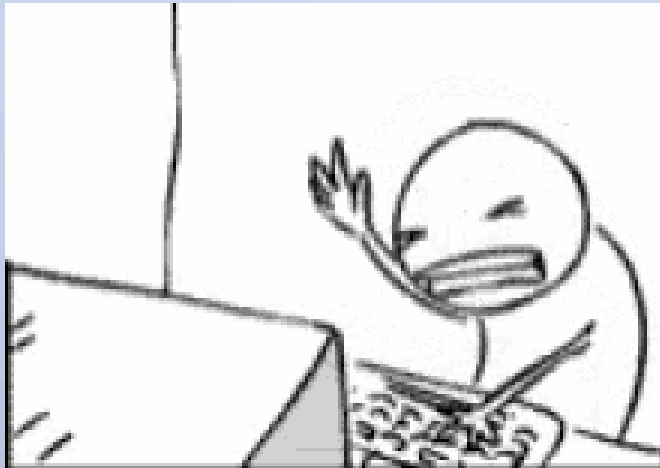
# **Infraestructura común de IoT**



Ejemplo de Internet of Things Architecture de Cloudcraft  
Cloudcraft

# MicroPython

- Python3 compacta
- Rapido de aprender
- Sencillo
- Multiplataforma
- Libre



# FIRMWARE

1.

Comandos AT



2.

Código Arduino



## **Microcontroladores ESP**

- Chip de bajo costo.
- Pila TCP/IP para conexión WiFi.
- Soporta una variedad de lenguajes.
- Procesador 32 bits
- Memoria flash y RAM

# Cloud Services



# MQTT y MicroPython

# Demostración

## Código

### Imports

```
import network
from umqtt.robust import MQTTClient
import time
```

## Conexión WiFi

```
sta= network.WLAN(network.STA_IF)
sta.active(True)
sta.connect("SSID", "PASS")
time.sleep(5)
```

## Configuración Ubidots items

```
ubidotsToken = "ubiotstoken"  
clientID = "clientid"  
topic=b"/v1.6/devices/{devicelabel}"
```

## Creación de objeto MQTT

```
client = MQTTClient(clientID, "mqtt://things.ubidots.com",  
    1883, user = ubidotsToken,  
    password = ubidotsToken) #creacion de objeto  
client.connect()
```

## Publish

```
msg = b'{"temp":20}'  
print(msg)  
client.publish(topic, msg)
```

## Subscribe

```
client.set_callback(cb)  
client.subscribe(bytes(topic, 'utf-8'))  
  
while True:  
    try:  
        client.wait_msg()  
  
    except Exception as e:  
        print(e)  
        client.disconnect()
```

## Links a repos

- [https://github.com/FunPythonEC/MQTT\\_CLOUD\\_FLISOL19](https://github.com/FunPythonEC/MQTT_CLOUD_FLISOL19)
- [https://github.com/FunPythonEC/ubidots\\_mqtt\\_upy](https://github.com/FunPythonEC/ubidots_mqtt_upy)

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