Uso de IoT servers con MicroPython

Ponentes:

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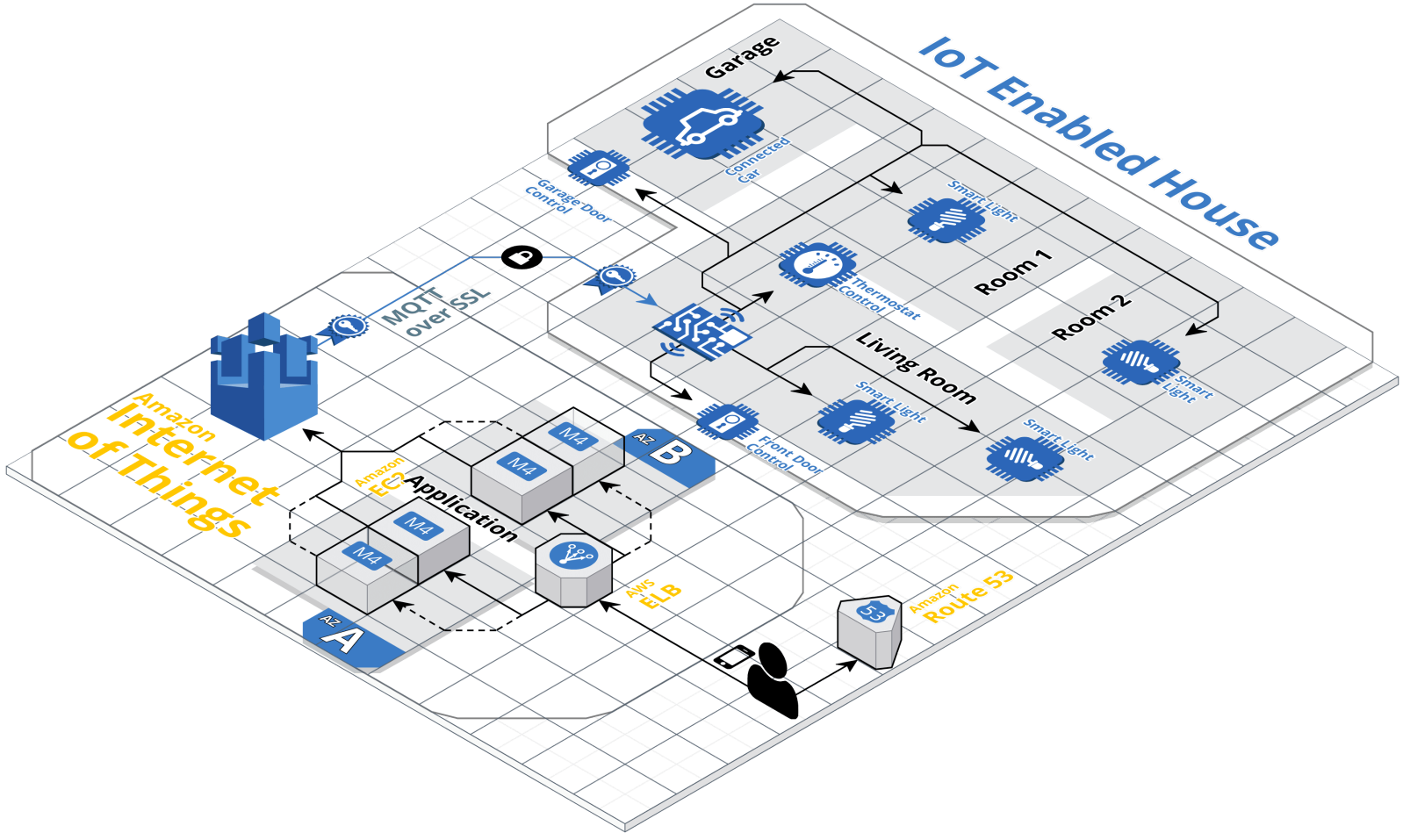
FP
Fun Python

Infraestructura común de IoT

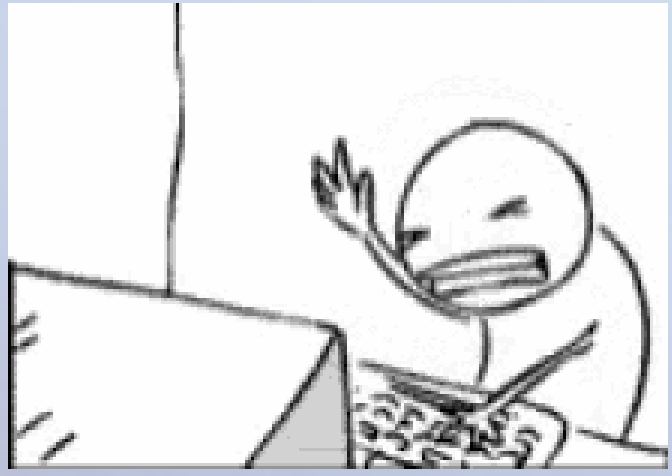


Ejemplo de Internet of Things Architecture de Cloudcraft

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/ubidots_mqtt_upy

Contacto

- GitHub: https://github.com/FunPythonEC
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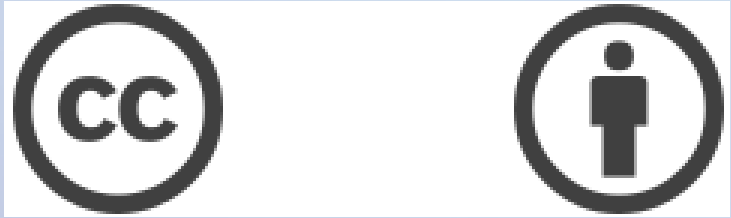

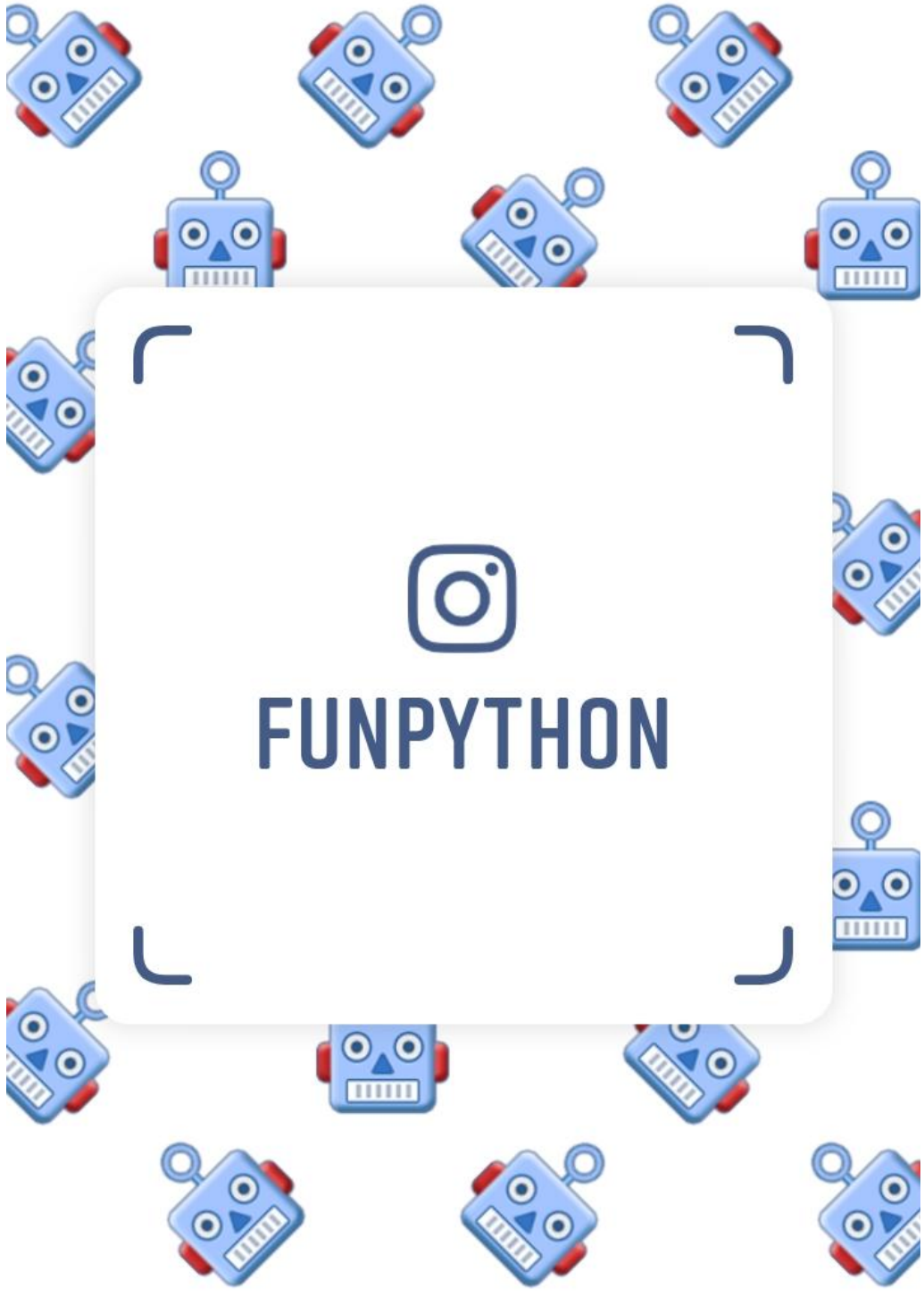
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