

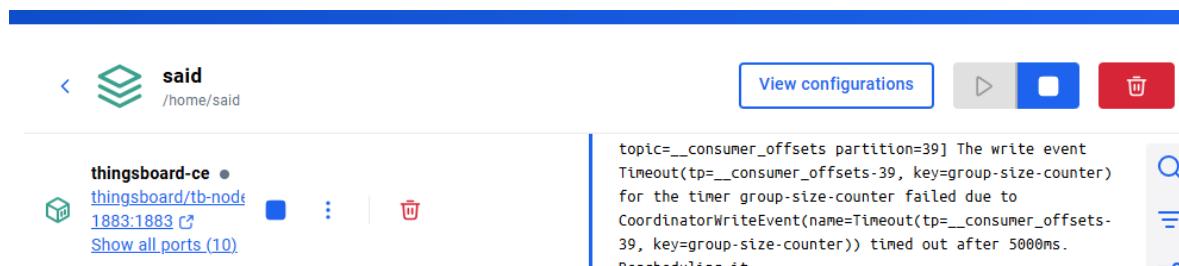
Inicialización de thingsboard

```
Seleccionar said@DESKTOP-3LCKMFC: ~
watch      Watch build context for service and rebuild/refresh containers when files are updated
Run 'docker compose COMMAND --help' for more information on a command.
unknown docker command: "compose open"
said@DESKTOP-3LCKMFC:~$ docker compose run thingsboard-ce
[+] Creating 2/2
  ⬤ Container said-postgres-1  Running
  ⬤ Container said-kafka-1    Running
Starting 'ThingsBoard Node Microservice' ...
OpenJDK 64-Bit Server VM warning: Option UseBiasedLocking was deprecated in version 15.0 and will likely be removed in a
future release.

[====]
:: ThingsBoard ::      (v4.2.0)
[=====]

2025-09-29 13:28:49,055 [background-preinit] INFO o.h.validator.internal.util.Version - HV000001: Hibernate Validator 8
.0.2.Final
2025-09-29 13:28:49,316 [main] INFO o.t.s.ThingsboardServerApplication - Starting ThingsboardServerApplication v4.2.0 u
sing Java 17.0.16 with PID 1 (/usr/share/thingsboard/bin/thingsboard.jar started by thingsboard in /usr/share/thingsbo
ard/bin)
2025-09-29 13:28:49,318 [main] INFO o.t.s.ThingsboardServerApplication - No active profile set, falling back to 1 defau
lt profile: "default"
2025-09-29 13:28:50,326 [main] WARN o.s.c.a.AnnotationTypeMapping - Support for convention-based annotation attribute o
```

Contenedor de Docker.



Docker en funcionamiento:

```
said@DESKTOP-3LCKMFC:~$ docker-compose up -d
[+] Running 3/3
  ⬤ Container said-kafka-1    Running
  ⬤ Container said-postgres-1  Running
  ⬤ Container said-thingsboard-ce-1  Running
```

Thingsboard en local host:

Hora de creación ↓	Nombre	Perfil de dispositivo	Etiqueta	Estado	Customer	
2025-08-26 07:43:48	Esp32	default	esp32	Inactivo		
2025-08-25 08:23:43	Thermostat T2	thermostat		Inactivo		
2025-08-25 08:23:43	Thermostat T1	thermostat		Inactivo		
2025-08-25 08:23:42	Raspberry PI Demo Device	default		Inactivo		
2025-08-25 08:23:42	DHT11 Demo Device	default		Inactivo		
2025-08-25 08:23:42	Test Device C1	default		Inactivo	Customer C	
2025-08-25 08:23:42	Test Device R1	default		Inactivo	Customer B	

Dispositivo:

Esp32

Detalles del dispositivo

Detalles Atributos Última telemetría Campos calculados Alarmas

Abrir página de detalles Hacer público el dispositivo Asignar al customer

Gestionar credenciales Verificar conectividad Eliminar dispositivo

Copiar ID del dispositivo Copiar token de acceso

Nombre* Esp32

Perfil de dispositivo* default

Etiqueta esp32

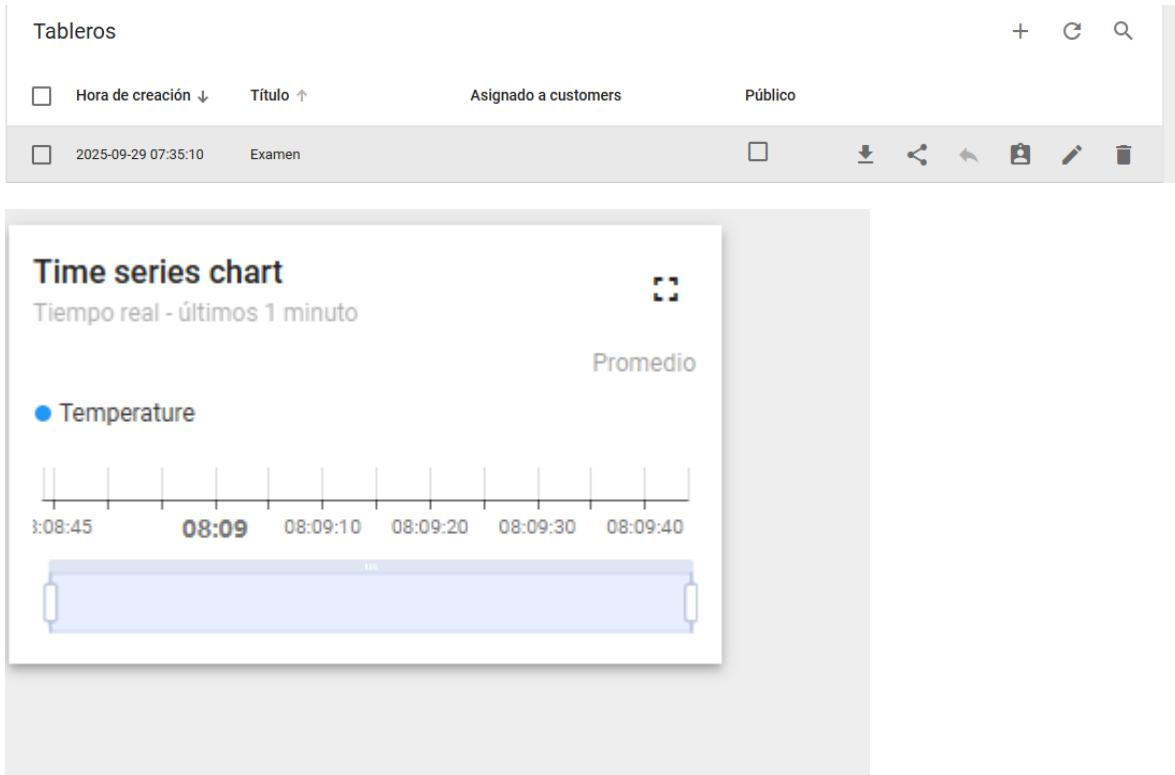
Firmware asignado

Hora de creación ↓	Nombre	Perfil de dispositivo	Etiqueta	Estado	Customer
2025-08-26 07:43:48	Esp32	default	esp32	Inactivo	

Mosquito:

```
said@DESKTOP-3LCKMFC:~$ mosquitto_pub -d -q 1 -h localhost -p 1883 -t v1/devices/me/telemetry -u "LPAxW3DpN0PM5W2nF2tZ" -m "{temperature:25}"
Client null sending CONNECT
Client null received CONNACK (0)
Client null sending PUBLISH (d0, q1, r0, m1, 'v1/devices/me/telemetry', ... (16 bytes))
Client null received PUBACK (Mid: 1, RC:0)
```

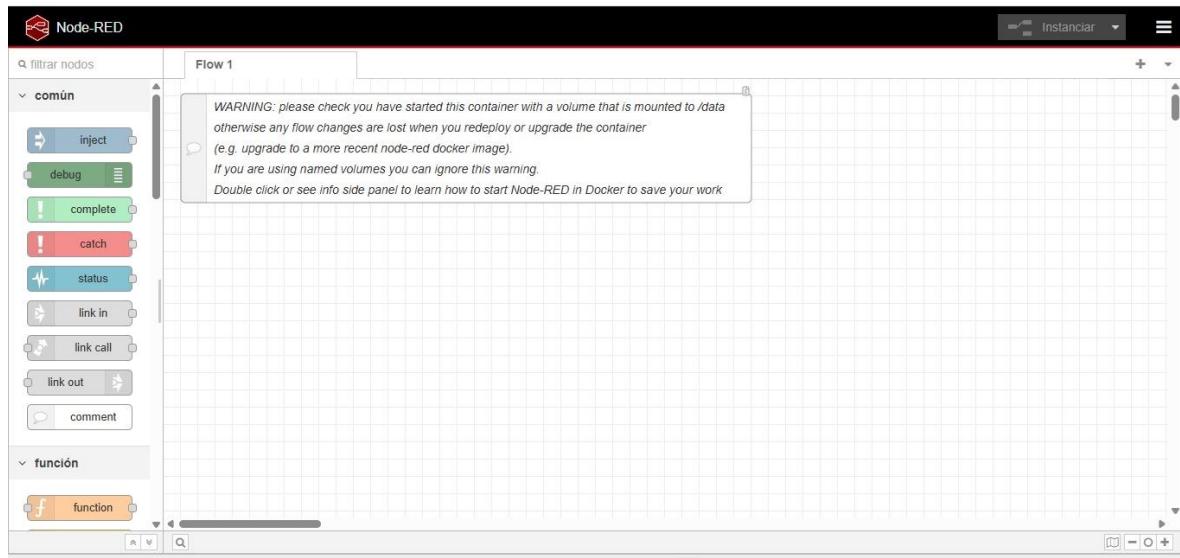
Tablero para mostrar los datos:



Código Arduino configurado con mi wifi mi mqtt y el token de acceso y cargándolo en la esp-32:

```
sketch_sep29a.ino
1 #include <WiFi.h>
2 #include <PubSubClient.h>
3
4 // Configuración WiFi
5 const char* ssid = "Souuuuu";
6 const char* password = "2131415161";
7
8 // Configuración ThingsBoard
9 const char* mqtt_server = "mqtt://TU_IP_LOCAL:1883";
10 const int mqtt_port = 1883;
11 const char* token = "LPaXw3DpN0PM5W2nF2tZ";
12
13 // Topics MQTT
14 const char* telemetry_topic = "v1/devices/me/telemetry";
15 const char* rpc_topic = "v1/devices/me/rpc/request/+";
16
17 WiFiClient espClient;
18 PubSubClient client(espClient);
19
```

Node:RED:



Conecconn:

Fallida no se conecto falla en los puertos.