



# The Things Network Madrid

EMPEZAMOS A LAS 18:30

POR SI OS INTERESA, A LAS 18:00, MARC POUS (BALENA) REALIZA SU IOT HAPPY HOUR EN [HTTPS://WWW.YOUTUBE.COM/WATCH?V=ZGFPKEDI4SQ](https://www.youtube.com/watch?v=ZGFPKEDI4SQ) EXPLICANDO CÓMO MONTAR TTS V3 EN UNA RASPBERRY PI

# Documentación

- ▶ Migración de nodos

- ▶ <https://www.thethingsnetwork.org/docs/the-things-stack/migrate-to-v3/migrate-using-console/>

- ▶ Migración de gateways

- ▶ <https://www.thethingsnetwork.org/docs/the-things-stack/migrate-to-v3/migrate-gateways/>

# Migración de nodos OTAA

- ▶ Crear un nodo nuevo en la v3 con los mismos DevEUI, AppEUI y AppKEY que en la V2.
- ▶ Cambiar el AppKEY de la V2 por uno inventado para que deje de ser válido (no se recomienda borrar el dispositivo de la v2).
- ▶ Forzar un Join del dispositivo; por ejemplo reiniciándolo.



# Migración de nodos ABP

- ▶ ¿Puedo reprogramarlo?
  - ▶ No lo migramos; creamos uno nuevo en la v3 y listo.
- ▶ No puedo/quiero reprogramarlo
  - ▶ Creamos uno nuevo en V3 con los mismo DevAddr, NwksKey y AppsKey
  - ▶ Seguir las indicaciones de <https://www.thethingsnetwork.org/docs/the-things-stack/migrate-to-v3/migrate-using-console/>

- **Advanced settings** must be set on registration (beware that changing these settings might not work later)
  - Set **Frame counter width** to `32 bit` (the value used in The Things Network V2)
  - **RX1 Delay** value depends on your use case (see the note below)
  - Set **RX1 Data Rate Offset** to `0`
  - Your device probably resets frame counters, so check the **Resets Frame Counters** box
  - Set **RX2 Data Rate Index** to `3` if your frequency plan is EU868
  - Set **RX2 Frequency** to `869525000` if your frequency plan is EU868
  - Set **Factory Preset Frequencies** for EU868 devices to `868100000, 868300000, 868500000` for all devices, or to `867100000, 867300000, 867500000, 867700000, 867900000, 868100000, 868300000, 868500000` for 8-channel devices

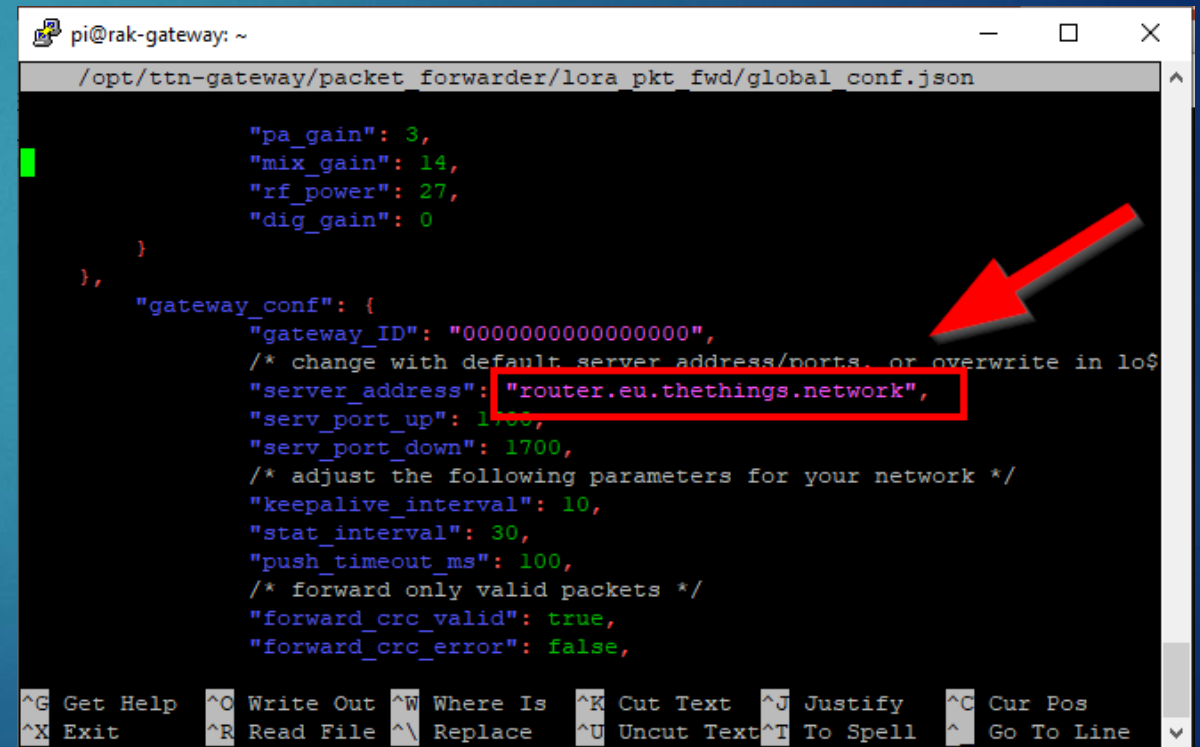
# Migración/Reclamación de gateways

- ▶ El TTIG hay que reclamarlo usando el mismo EUI y la clave WiFi que figura en la etiqueta.
- ▶ El resto de gateways estarán en uno de estos 3 casos, que siempre comenzarán creando un gateway nuevo en la v3 con el mismo EUI que el antiguo:
  - ▶ Raspberry: Quiero aprovechar para pasar de UDP a Basic Station → Balena
  - ▶ Raspberry: Quiero complicarme la vida lo menos posible → Seguir con UDP
  - ▶ Otros: Documentación específica



# Raspberry Pi + RAK831

- ▶ `sudo gateway-config > Edit packet-forwarder config > gateway_config > server_address > eu1.cloud.thethings.network`

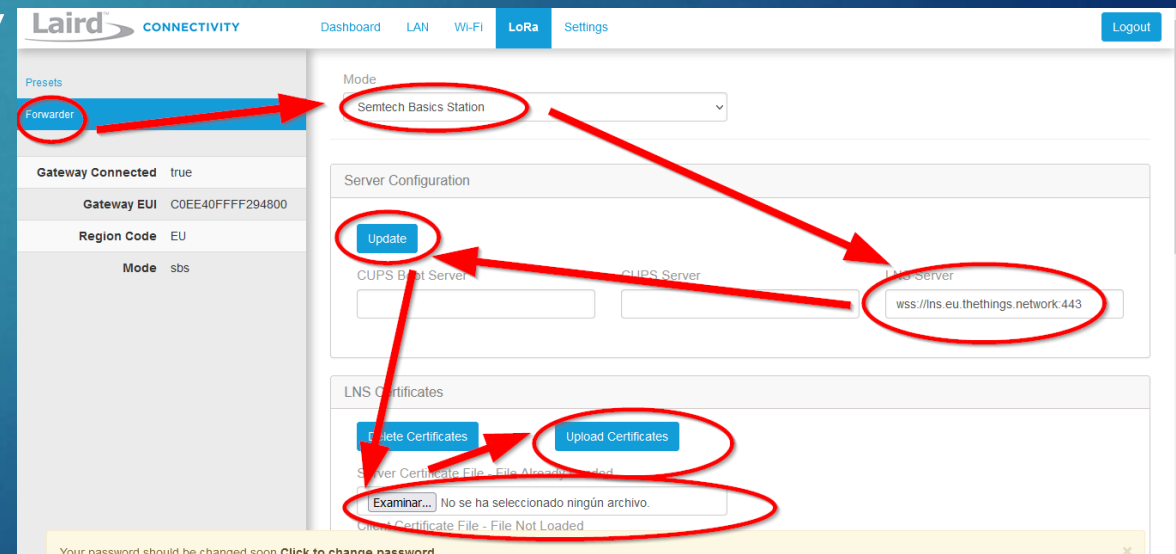


```
pi@rak-gateway: ~  
/opt/ttn-gateway/packet_forwarder/lorawan_pkt_fwd/global_conf.json  
  
    "pa_gain": 3,  
    "mix_gain": 14,  
    "rf_power": 27,  
    "dig_gain": 0  
  },  
  "gateway_conf": {  
    "gateway_ID": "0000000000000000",  
    /* change with default server address/ports, or overwrite in lo$  
    "server_address": "router.eu.thethings.network",  
    "serv_port_up": 1700,  
    "serv_port_down": 1700,  
    /* adjust the following parameters for your network */  
    "keepalive_interval": 10,  
    "stat_interval": 30,  
    "push_timeout_ms": 100,  
    /* forward only valid packets */  
    "forward_crc_valid": true,  
    "forward_crc_error": false,  
  }  
}
```

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos  
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^\_ Go To Line

# Laird

- ▶ <https://www.lairdconnect.com/documentation/application-note-setting-basic-station-things-stack-v3>
- ▶ `wss://eu1.cloud.thethings.network:8887`
- ▶ ROOT X1
- ▶ <https://www.thethingsindustries.com/docs/reference/root-certificates/>
- ▶ Crear API Key
- ▶ `echo Authorization: Bearer NNSXS.xxxxx>tc.key`





The background features a dark blue field with numerous bright blue and white light streaks radiating from the top left towards the bottom right, creating a sense of motion and depth. In the top right corner, there is a solid yellow rectangle.

# Gracias

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