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## Configuration of Kona Micro Lite Gateway on The Things Network (TTN)

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# Introduction

- » Reference guide to configure Kona Micro Lite gateway for The Things Network (TTN)
- » List requirement of tools
- » High-level procedure involves five steps
  1. Finding IP address of the GW
  2. Upgrading the firmware
  3. Updating LoRaWAN.json file
  4. Updating Customer.json file
  5. Commissioning the gateway on TTN

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# Requirements

- » Tool such as [Angry IP Scanner](#) or KonaFT to find IP address of the gateway
- » Kona Micro Lite gateway and KonaFT must be connected in the same sub-network to find IP address using KonaFT
- » [TFTP client](#) to upgrade firmware and re-configuration of the gateway

## NOTE:

1. KonaFT can be used only to find the IP address of the gateway.
2. Features related to Gateway Management of KonaFT are not supported by Kona Micro Lite gateway.

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# Requirements (Continued)

- » To upgrade the firmware and re-configure the gateway for commissioning on The Things Network, files listed in Table-1 are required.
- » All these files are located as attachments in **Network Server** category in **Knowledge Base** section on [TEKTELIC Support Portal](#).

Type of File	File Name for US915	File Name for EU868
Latest version of Firmware	semtech-v1.7.bin	semtech-v1.7.bin
LoRaWAN	LoRaWAN_TTN_NA.json	-
Customer Configuration	customer_ttn_NA_legacy.json	customer_ttn_EU_legacy.json

Table-1 BSP Upgrade Procedure

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# Finding Gateway IP Address using KonaFT

1. Go to KonaFT → Tools → Find My Gateway
2. Ensure your GW is connected to the same network shown in Drop-down menu on the left from Scan option
3. Click on Scan
4. Upon scanning, KonaFT will list down all the Gateways with MAC address and associated IP address found in network.
5. Note down the IP address assigned to the Kona Micro Lite gateway.

**Note: No other functions for Kona Micro Lite gateway can be performed using KonaFT.**

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# Upgrading Firmware

1. Use TFTP client to put the **semtech-v1.7.bin** file to the gateway as shown in Figure-1
2. Gateway reboots after a successful firmware upgrade.

**Note:**

In case of failure, a TFTP error is reported and gateway continue to operate with the old firmware.

# Upgrading firmware (Continued)

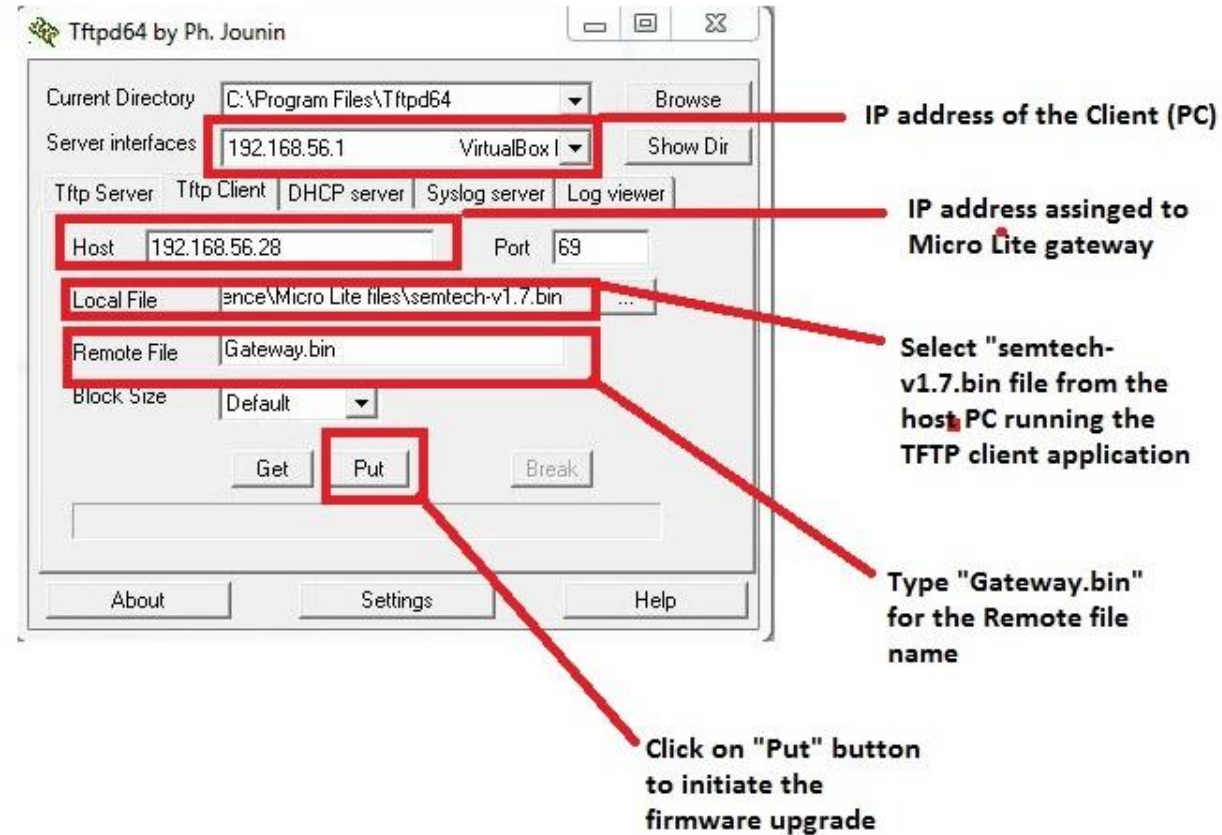


Figure-1 Firmware Upgrade

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# Updating LoRaWAN file

1. Use TFTP client to put the **LoRaWAN.json** file to the gateway as shown in Figure-2 depending upon the type of Kona Micro Lite gateway you are using.
  - » LoRaWAN\_TTN\_NA.json (if you are using US915 gateway) OR
  - » No need of any file if you are using EU868 gateway since the existing file on the gateway shall work fine
2. Power Cycle the gateway

## Note:

In case of failure, a TFTP error is reported and gateway continue to operate with the old file.



# Updating LoRaWAN file (Continued)

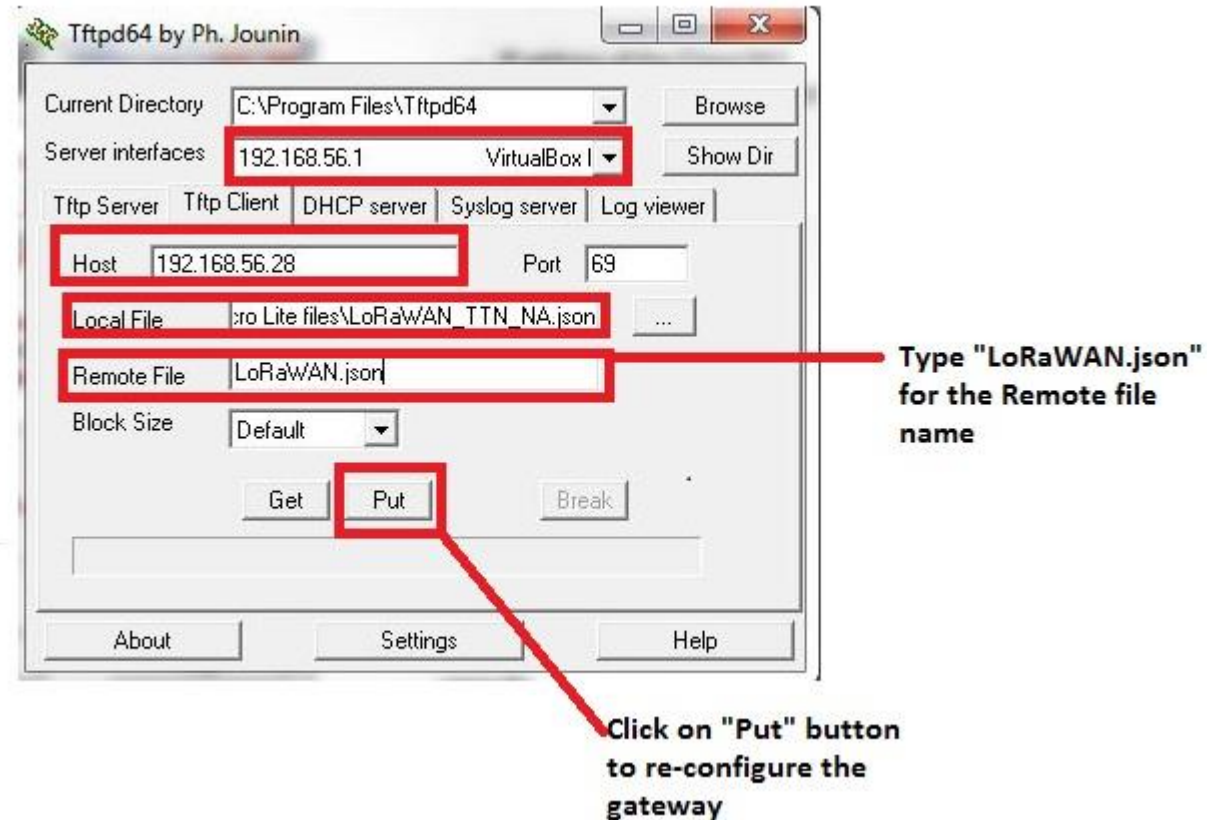


Figure-2 Re-configuring LoRaWAN.json file

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# Updating Customer file

1. Use TFTP client to put the **Customer.json** file to the gateway as shown in Figure-3 depending upon the type of Kona Micro Lite gateway you are using.
  - » customer\_ttn\_NA\_legacy.json (if you are using US915 gateway) OR
  - » No need of any file if you are using EU868 gateway since the existing file on the gateway is configured to work with TTN.
2. Power Cycle the gateway

## Note:

In case of failure, a TFTP error is reported and gateway continue to operate with the old file.

# Updating Customer file (Continued)

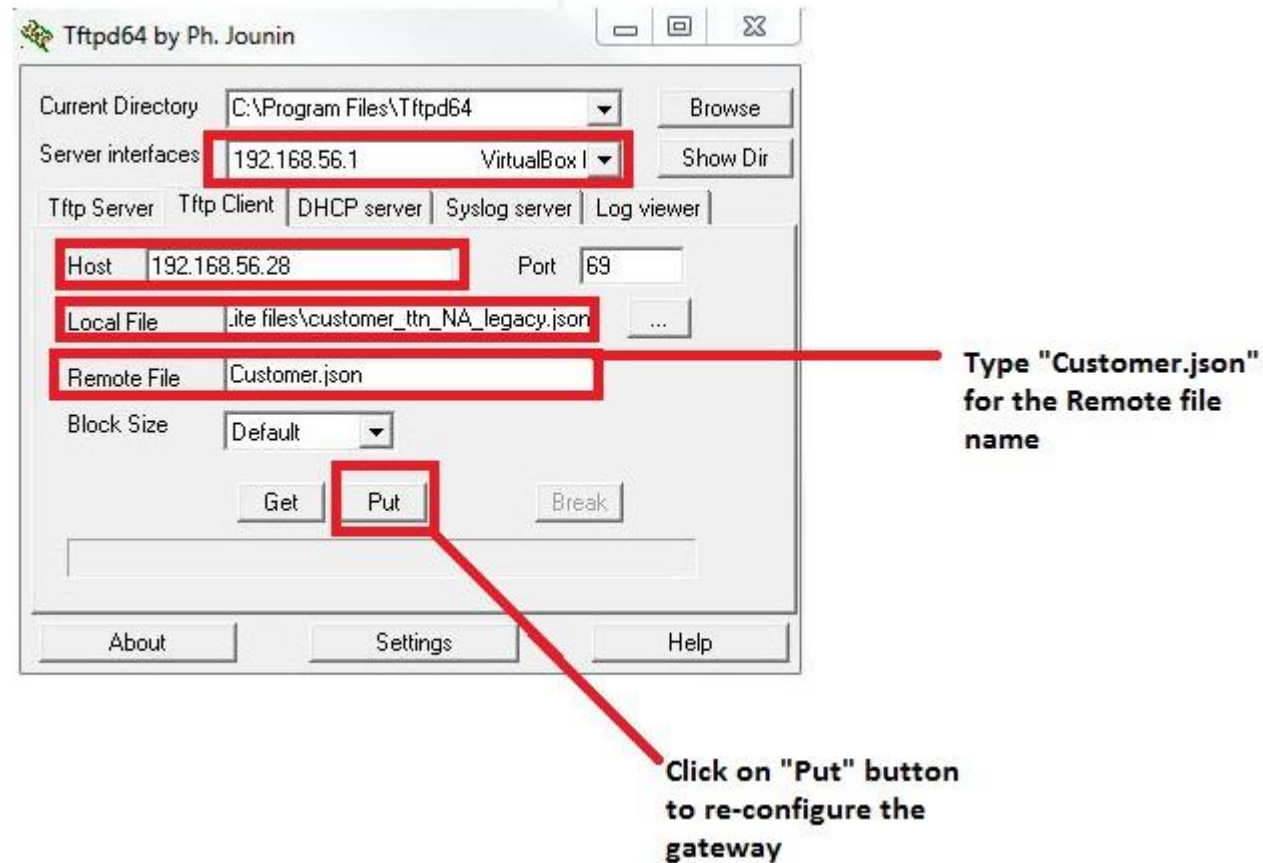
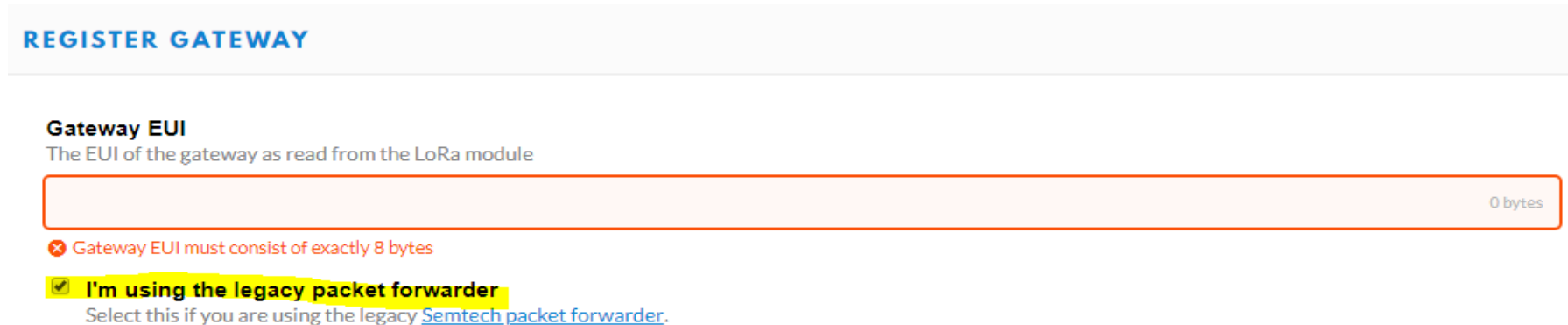


Figure-3 Re-configuring Customer.json file

# Commissioning on TTN

1. Login into your [The Things Network Account](#).
2. Go to **Console** → **Gateways** → **Register Gateway**.
3. While registering the gateway. Select “**I’m using the legacy packet forwarder**” option shown in Figure-4.



**REGISTER GATEWAY**

**Gateway EUI**  
The EUI of the gateway as read from the LoRa module

0 bytes

✘ Gateway EUI must consist of exactly 8 bytes

**I'm using the legacy packet forwarder**  
Select this if you are using the legacy [Semtech packet forwarder](#).

Figure-4 Registering Kona Micro Lite gateway on TTN

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# Commissioning on TTN

4. Pick right TTN router host. For example, for NA band, you need `router.us.thethings.network`
5. Click on **Register Gateway**.
6. Wait for few seconds. You will be able to see Status as **Connected** in the Gateway Overview

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