LORIOT APP for R3000 LG Series LoRa Gateways

Configuration Guide

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Background

The LORIOT application for Robustel R3000 LG Series gateways provides a quick and easy integration giving customers an off the shelf solution for building LoRaWAN® networks at a price/performance ratio that has not previously been available.

LORIOT are one of the world-leading LNS (LoRaWAN Network Server) providers with an impressive catalogue of successful deployments globally.

As a very high-volume manufacturer of 3G/4G routers and gateways, Robustel have commercial advantages unobtainable by many of their peers in the LoRa® Gateway market and are consequently able to offer both Indoor & Outdoor Industrial grade, high reliability Gateways at very competitive pricing.

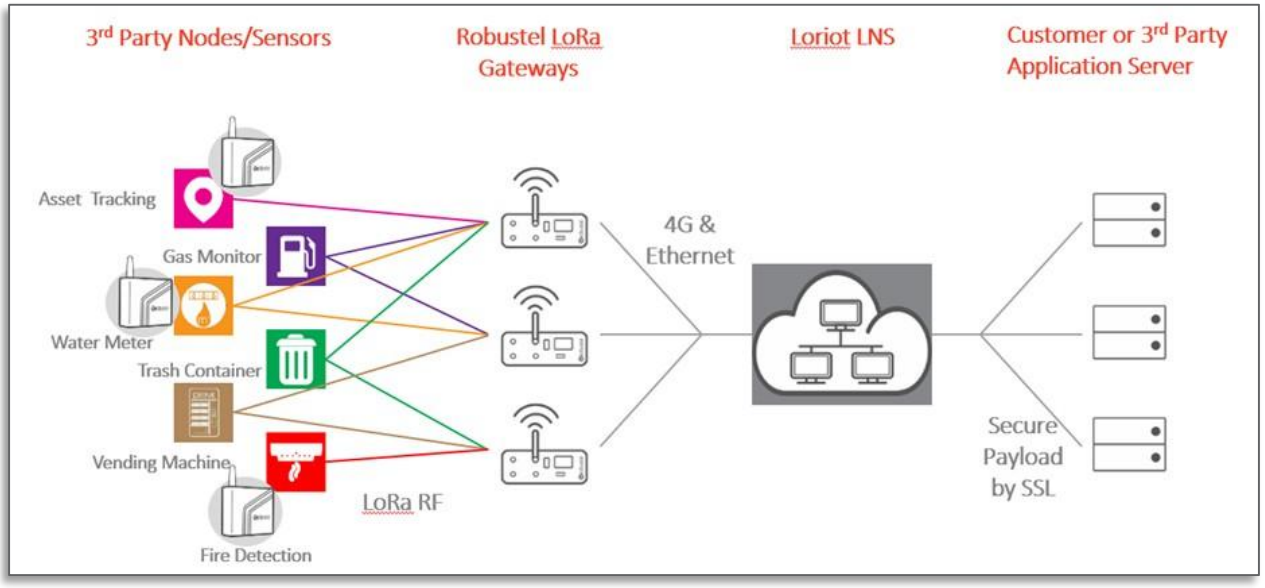

Figure 1.1 – LoRaWAN stack enabled quickly & easily with the “LORIOT APP”

Using a tried and tested LoRa Gateway + LNS combination helps to significantly re-risk the building of new LoRa networks and provides piece of mind that the companies involved have significant prior knowledge of each other’s products making effective and detailed technical support easier to come by.

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Chapter 1 Requirements

1. Go to www.robustel.com
2. Select “contact us” and request the latest LORIOT APP.
3. Alternatively, request the APP from your Robustel sales contact

Chapter 2 Connecting the R3000 LG to LORIOT Platform

1. Install LORIOT APP in the APP center of RobustOS and enter the URL of your LORIOT server and select enable.

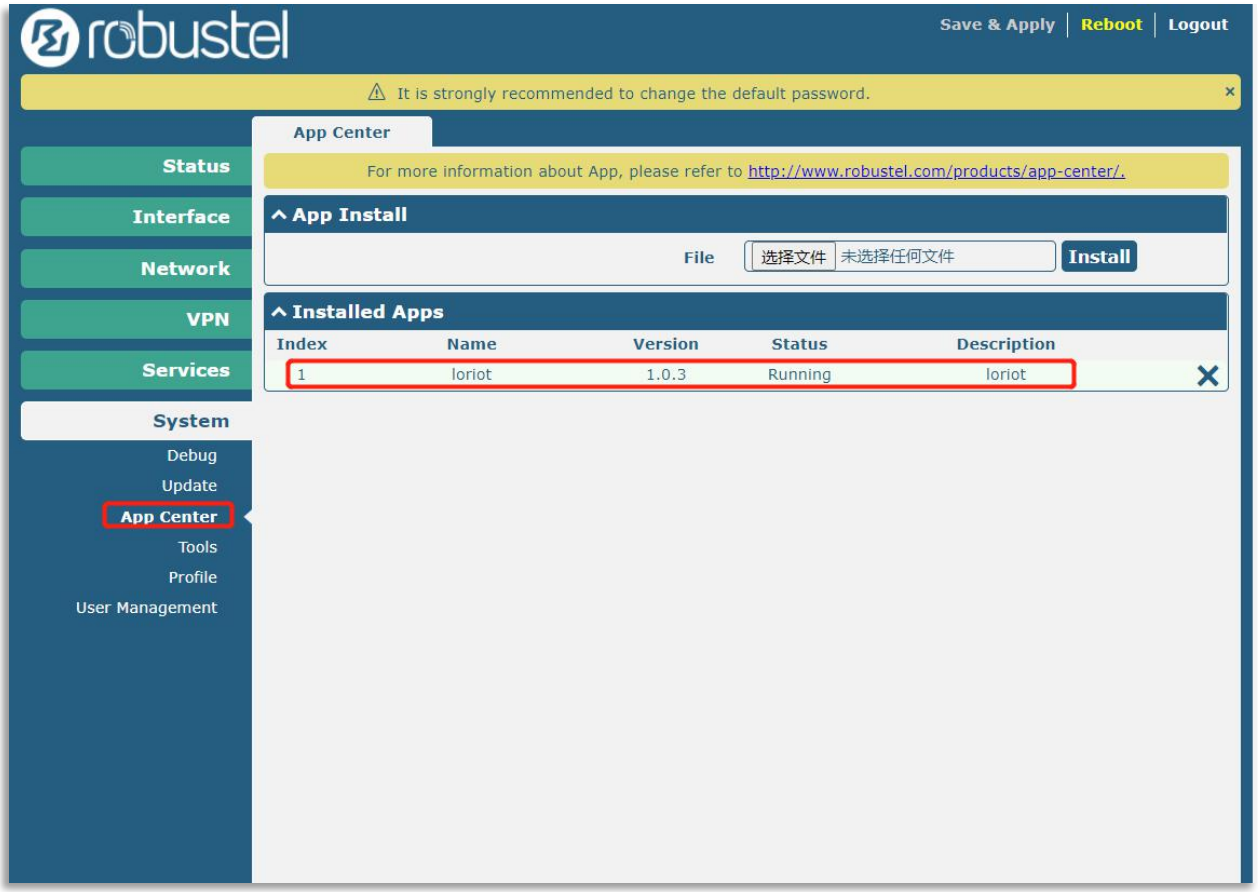

Figure 2.1 – App Center installation of LORIOT App

Figure 2.2 – Location of LORIOT APP and server settings once APP is installed

Common LORIOT hosted Server URLs:

Africa
AF1 - Cape Town, South Africa

Americas
SA1 - São Paulo, Brasil
US1 - California, USA
US2 - New York, USA

Asia
AP1 - Singapore
AP2 - Tokyo, Japan
AP3 - Mumbai, India
CN1 - Shenzhen, China

Europe
EU1 - Frankfurt, Germany
EU2 - Amsterdam, Netherlands
EU3 - Madrid, Spain
UK1 - London, United Kingdom

Pacific
AU1 - Sydney, Australia

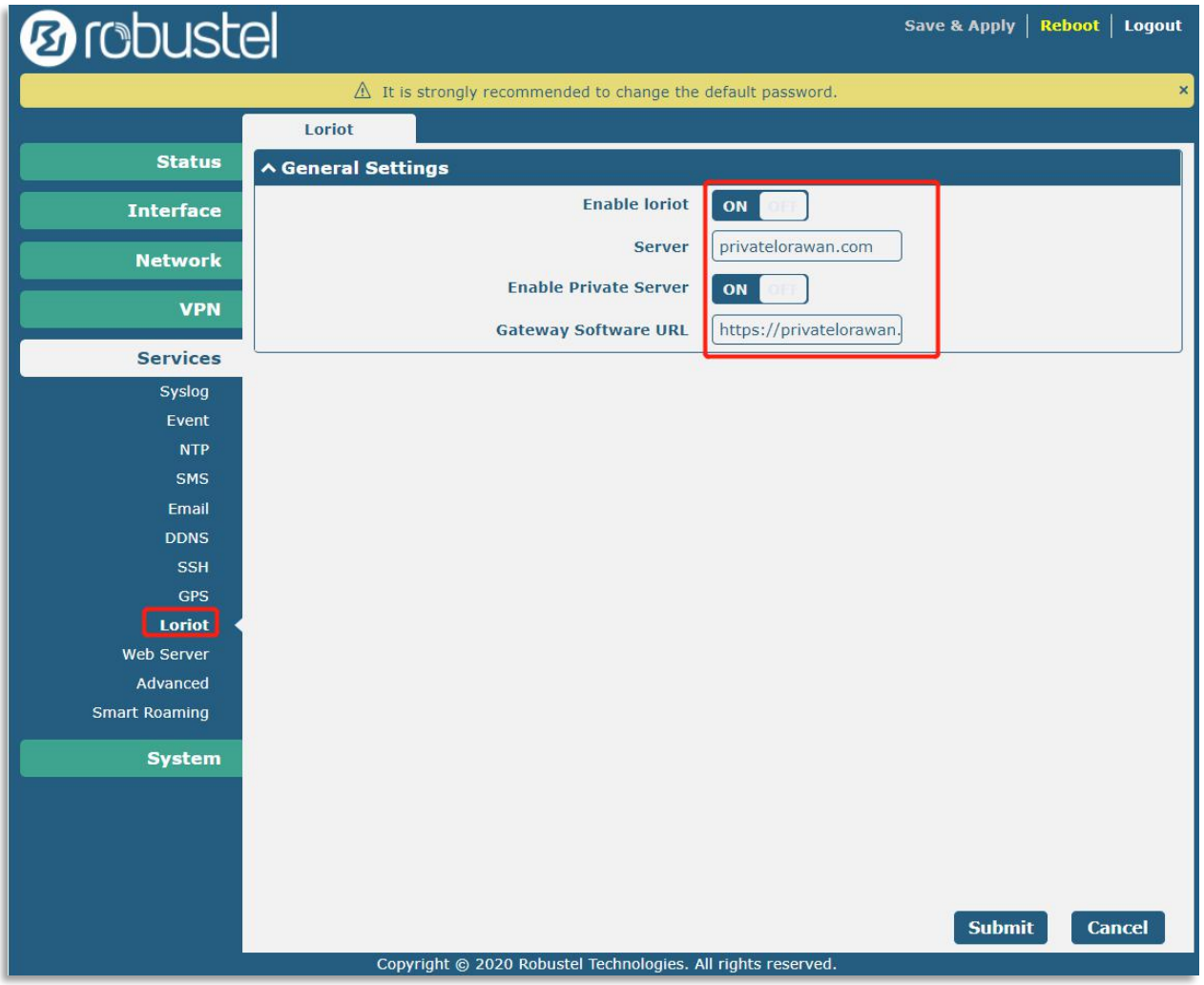

Figure 2.3 – If you are using a private server address, then turn on the Private Server button and enter the Gateway software URL

About Gateway software URL: It can be requested from the Loriot platform.

2. Ascertain the default gateway ID in R3000 LG by viewing “Interface->LoRa”

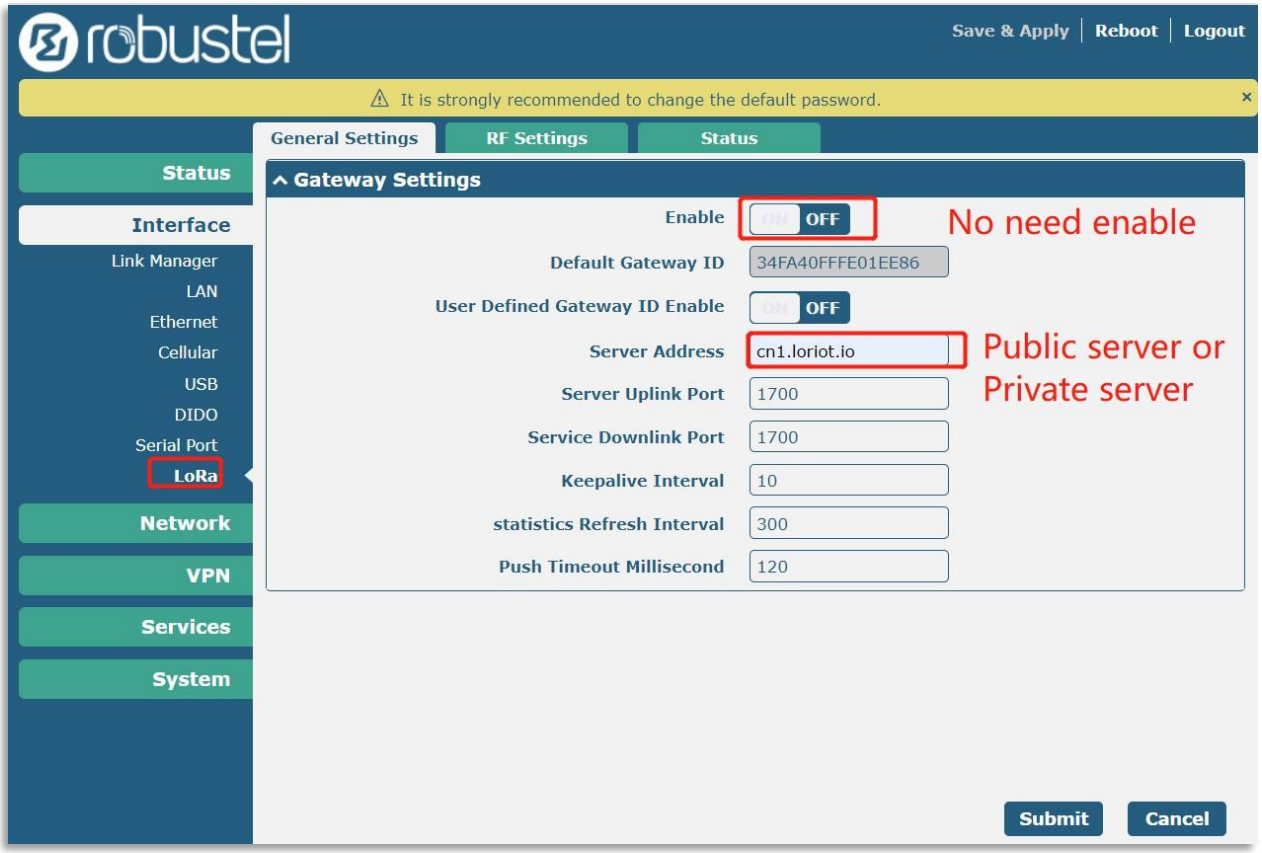

Figure 2.4 – Retrieving identifier required for LORIOT platform from GUI

Note: If you cannot connect to the LORIOT platform using the default Gateway ID, please check the MAC address that the APP is using via the syslog as follows.

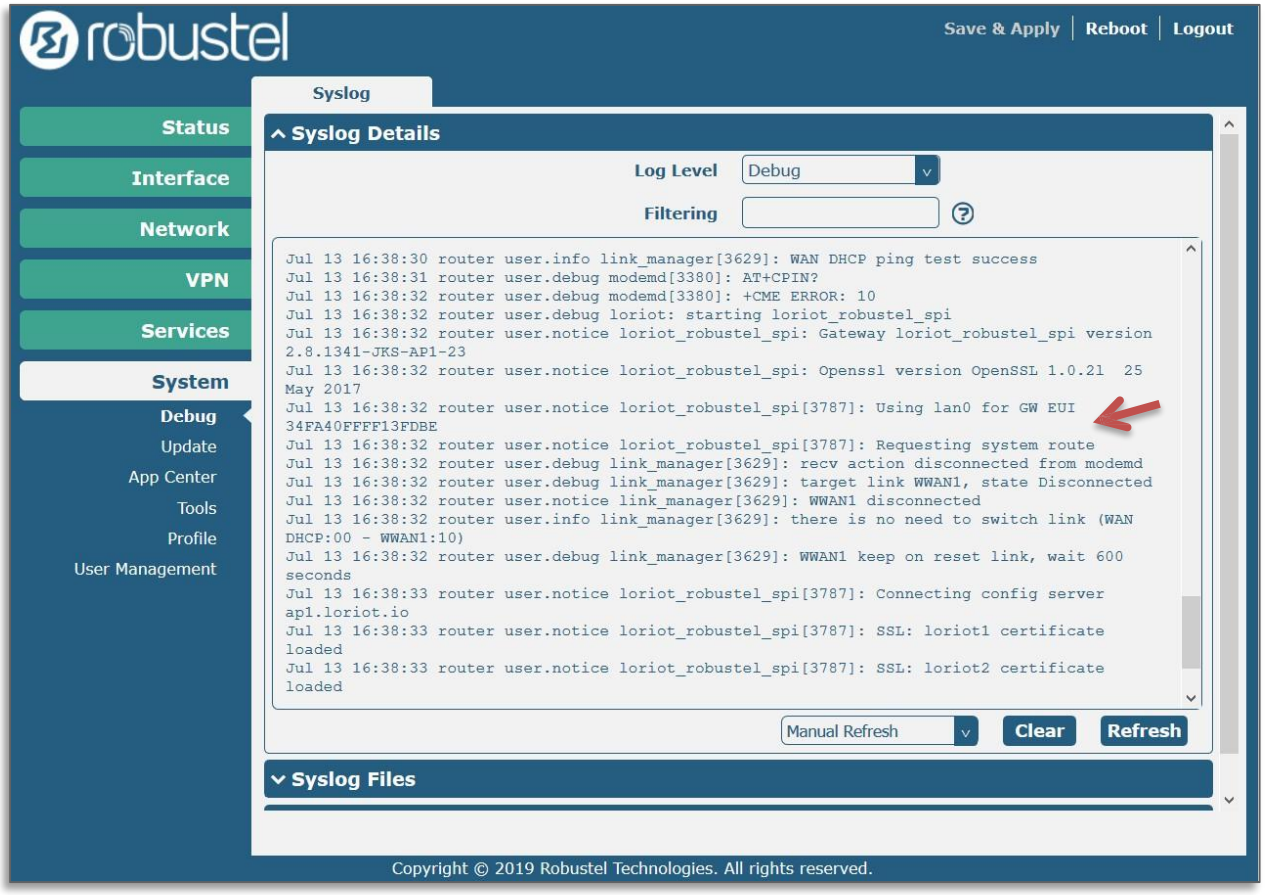

Figure 2.4 – Debug log confirming correct MAC / identifier for use in LORIOT platfor

3. Go to the LORIOT server and add R3000 LG gateway having created a new Network or using an existing network. The R3000 LG must be a member of a “Network”.

Figure 2.5 – Select the R3000 LG from LORIOT Gateway menu scree

Note: There is no need for you to enable the native LoRa interface and set the server information because the LORIOT APP will reference the internal LoRa configuration.

Figure 2.6 – Standard LoRa interface of R3000 LG, LORIOT APP runs independently

4. Input MAC address of gateway interface for LORIOT platform registration.

Please note that FFFE or FFFF is inserted after the first 6 characters of the MAC to make it a 64bit LoRaWAN gateway EUI.

For example, if 34:FA:40:13:FD:BE is the interface MAC, then 34FA40FFFE13FDBE should be the gateway EUI on the LORIOT platform.

5. If everything goes well, you will see R3000 LG online with LORIOT proprietary packet forwarder version info on the platform per below.

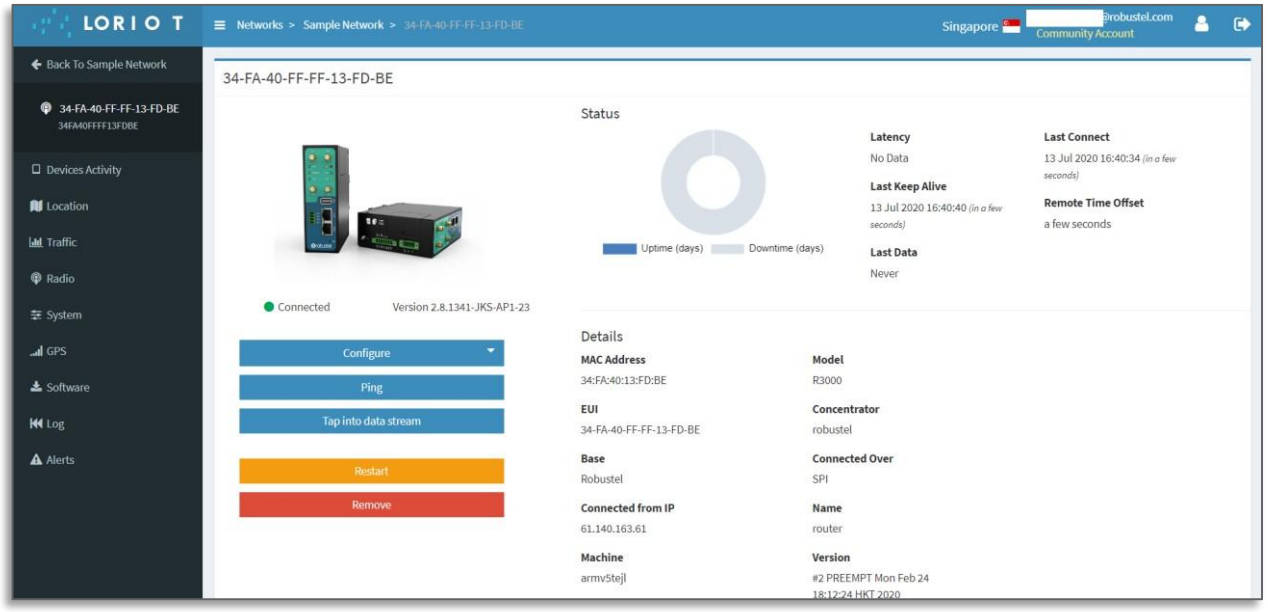

Figure 2.7 –R3000 LG correctly configured on LORIOT platform

Chapter 3 Connecting LoRaWAN Node/Sensor to the LORIOT Platform

1. Set up the LoRaWAN gateway frequency channel list correctly. The example below is AS923 AS2.

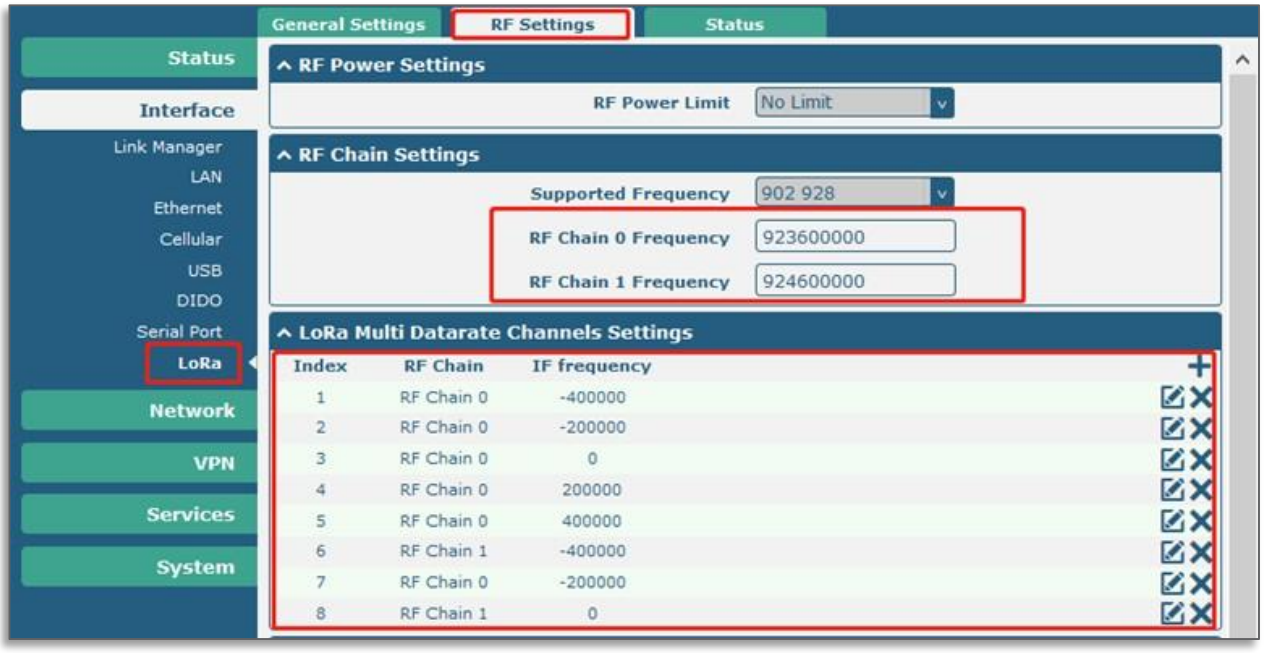

Figure 3.1 – RF Frequency section of R3000 LG settings

2. In the LORIOT platform, create a new application and click the "Enroll Device" tab.

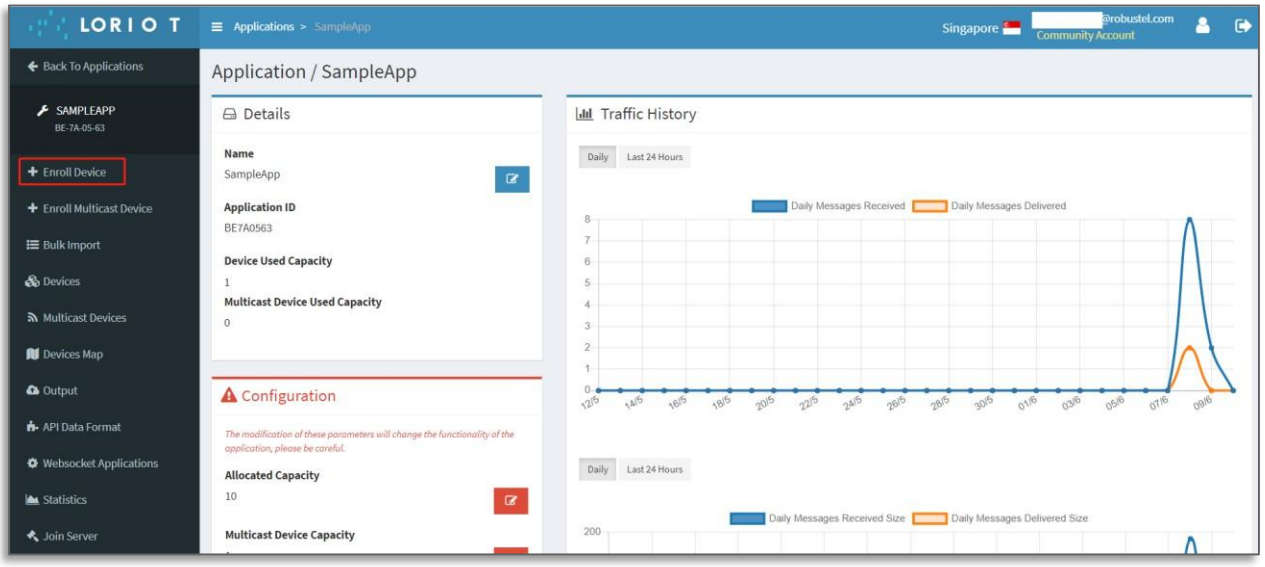

Figure 3.2 – Enroll device / add sensor process in LORIOT platform

3. Enter Title name, and get the "DevEUI", "AppEUI" and "AppKey" from Toolbox.

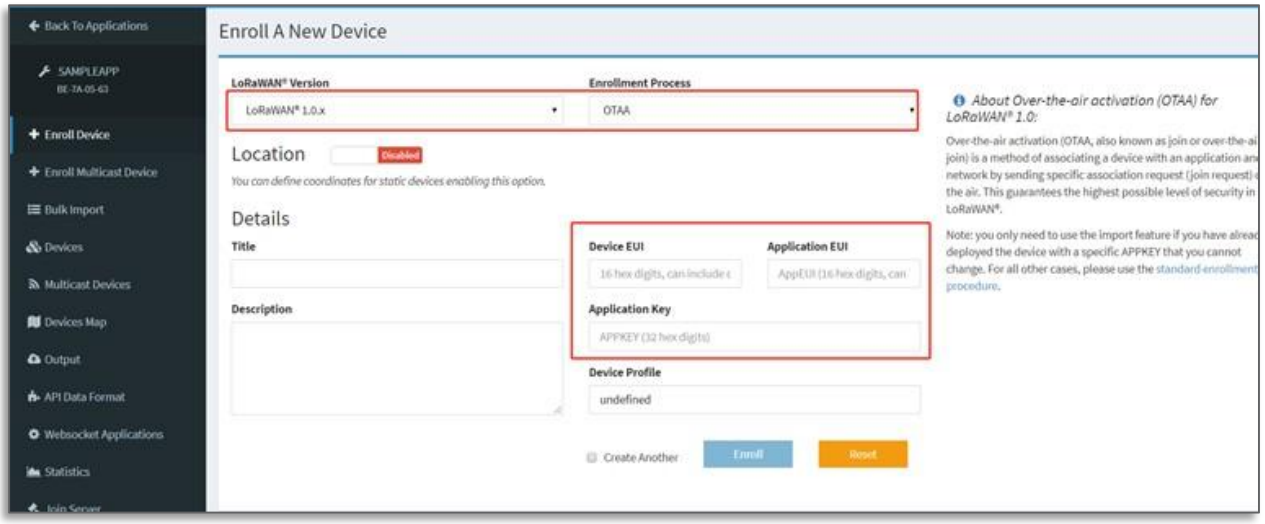

Figure 3.3 – Location of key parameters – DevEUI/AppEUI & AppKey – in LORIOT platform

4. Choose Device and you will see more details of the status and the configuration of the LoRaWAN node.

Figure 3.4 – LoRa sensor / node view

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