How To Connect LoRa RAK811 To Cayenne *V1.0*

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1. Introduction

This document mainly gives a detailed introduction about how to connect RAK811(Lora) to Cayenne. And we default you already know how to connect RAK811(Lora) to Mydevice,if not,please refer to the guide start document 《How To Connect Lora RAK811 to Mydevice》. According to the steps in the document, connect your RAK811(Lora) to Actility. Then read this document to know how to using Actility with Cayenne.

RAK811 Low-Power Long Range LoRa Technology Transceiver module, provides an easy to use, small size, low-power solution for long range wireless data transmission.

First, The RAK811 module complies with the latest LoRaWAN Class A & C protocol specifications, it is simple to access LWPA IOT platforms, such Actility etc. Second, it also support Lora Point to Point communications, this function can help customers implement their own private long range Lora network fast.
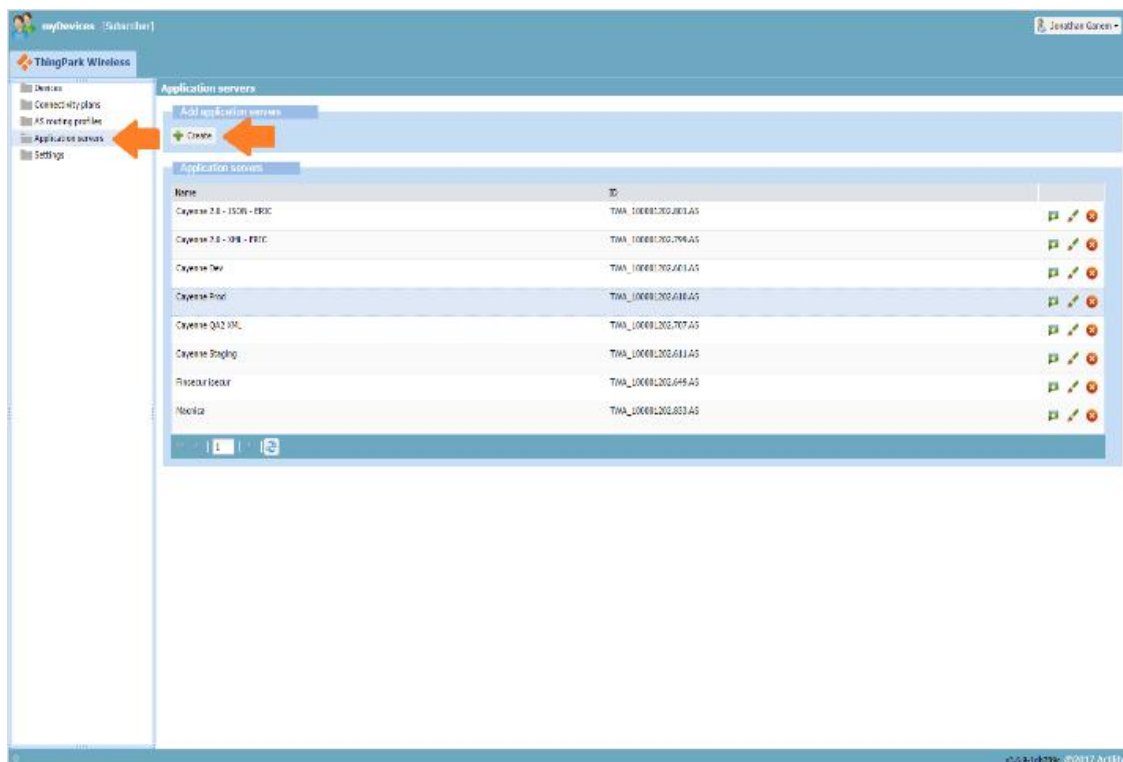
Module integrates semtech SX1276 and stm32L, offer user an serials At commands with UART Interface .It is easy to accomplish their applications, such as simple long range sensor data applications with external host MCU, low-power feature is suitable for battery applications.
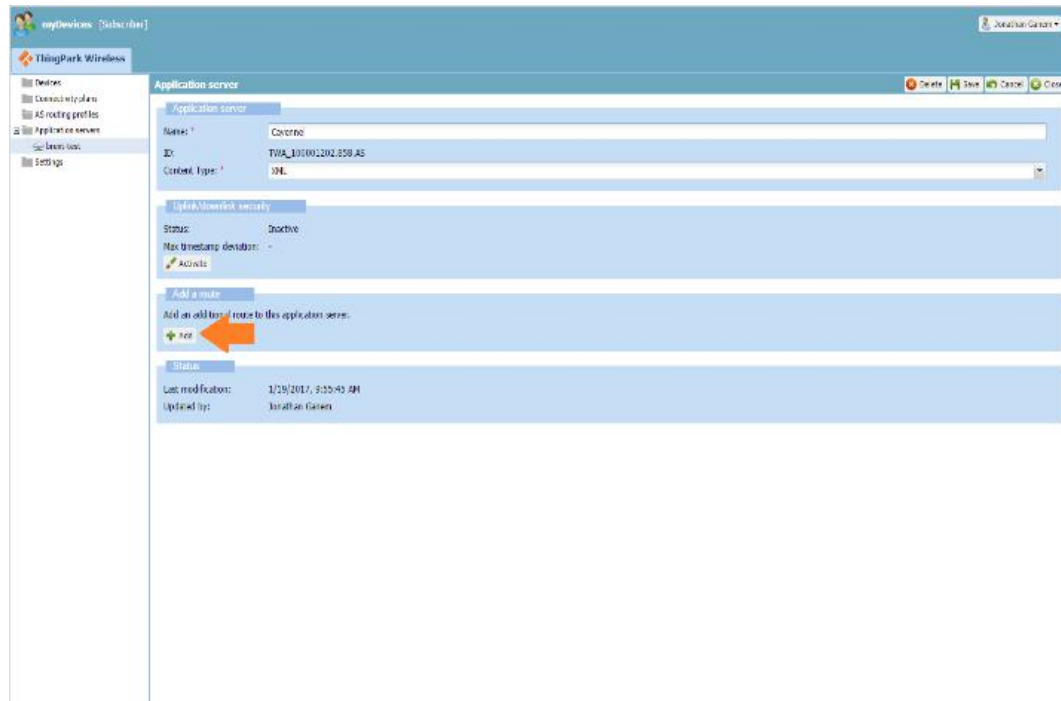
2. How to using Actility with Cayenne

In order for data from your device to reach Cayenne, you must create an **Application Server** that points to Cayenne in the Actility portal. You will also need to add an **AS Routing Profile** that uses this server. You only need to perform this step once. Any devices that you wish to add to Cayenne will then need to be configured to use the routing profile or Cayenne will not receive their data.

Begin by creating the **Application Server**. From the device manager, select the **Application Servers** entry and from the screen that appears, click on the **Create** button to begin creating a new server.
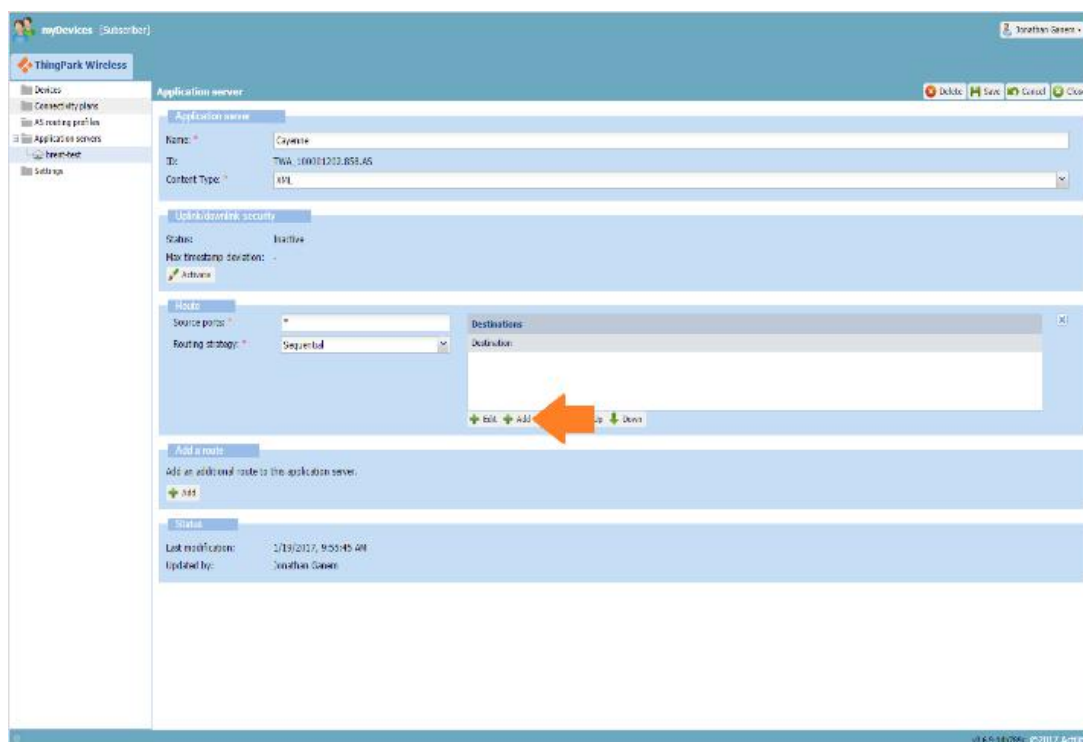
Begin by creating the Application Server. From the device manager, select the Application Servers entry and from the screen that appears, click on the Create button to begin creating a new server.
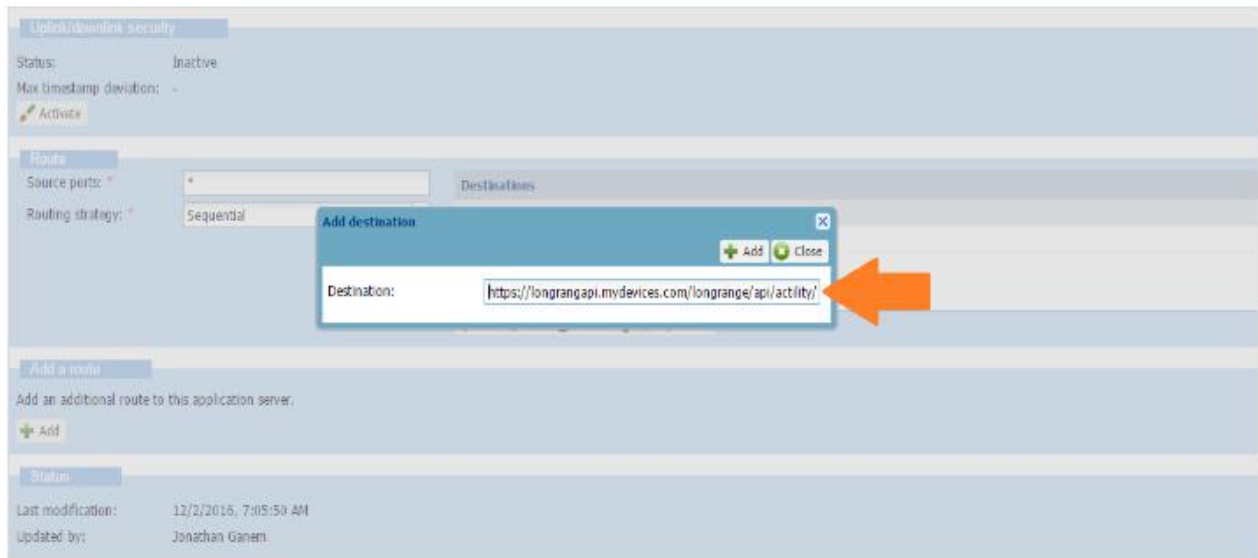

Give the new entry an appropriate name that you can refer to later, such as "Cayenne". After proceeding, you will see the *Application Server* screen where you can enter in information for the application server. From this screen, click on the **Add** button located in the **Add a route** section.
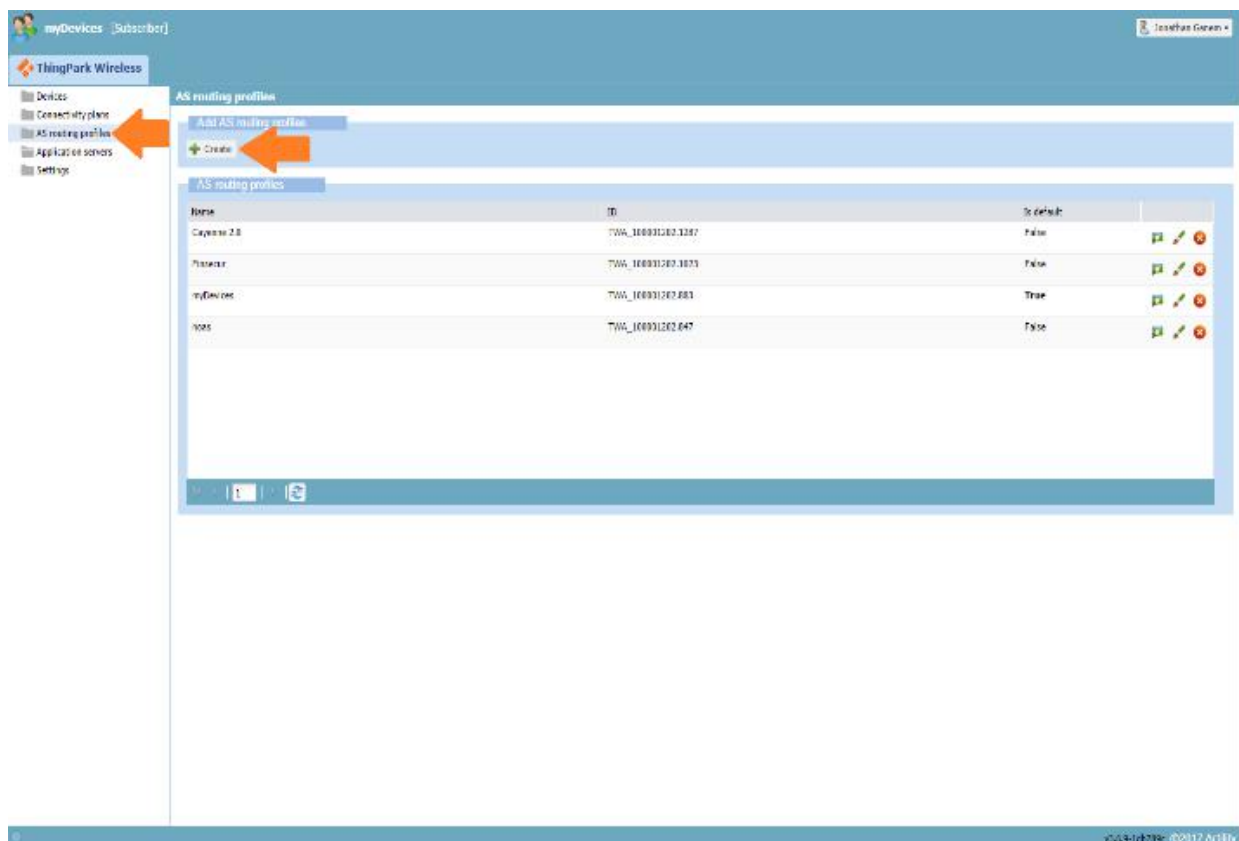
In the **_Route_** section that gets added to the screen, click on the **Add** button to start adding a destination.
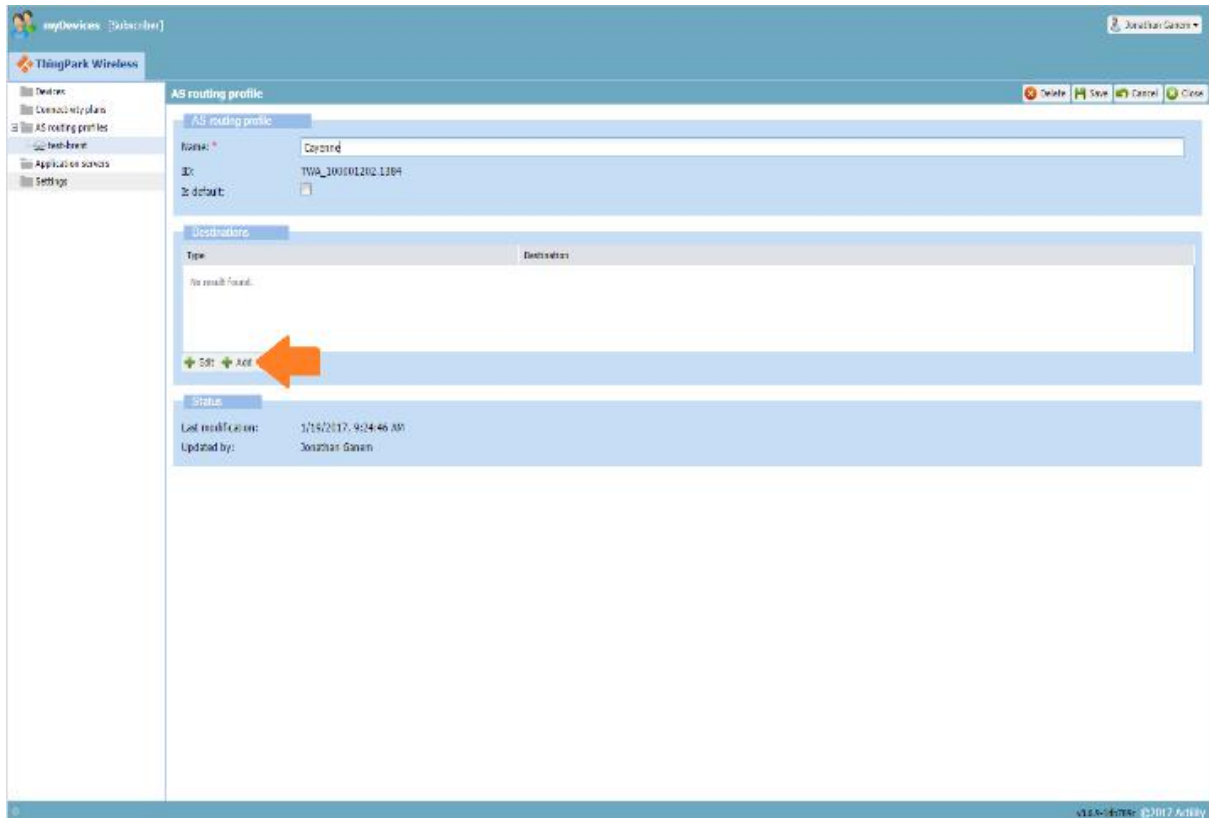

In the **_Add Destination_** dialog that appears, enter in the Cayenne Actility URL https://longrangeapi.mydevices.com/longrange/api/actility/messages/add and then click on the **Add** button to save your changes.
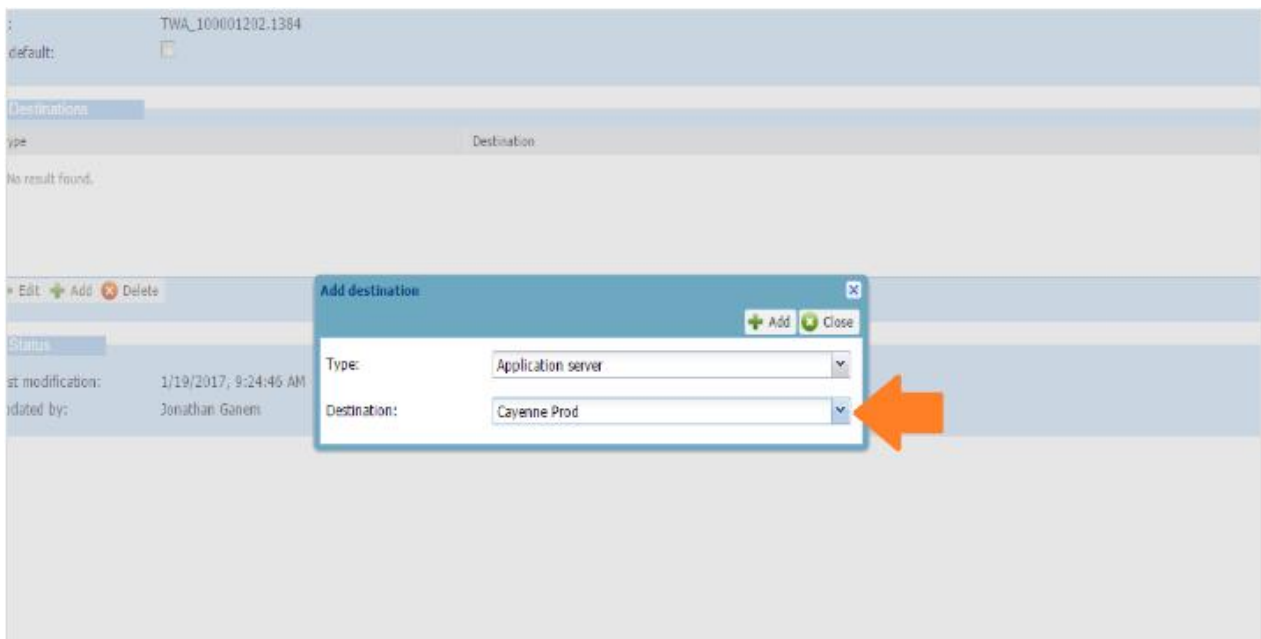
Now that the Application Server has been setup, we need to create the AS Routing Profile. To create this profile select the **AS routing profiles** entry on the portal. From the screen that appears, click on the **Create** button to begin creating a new profile.
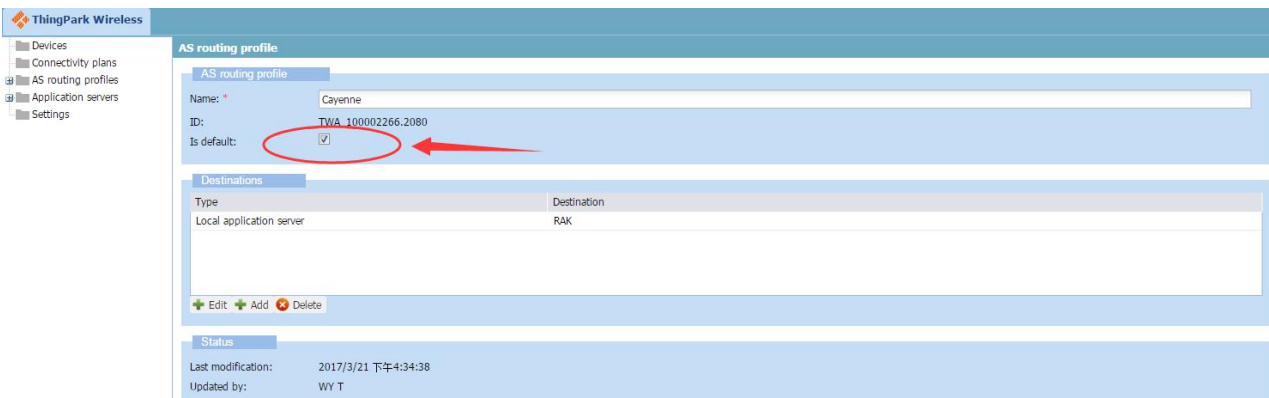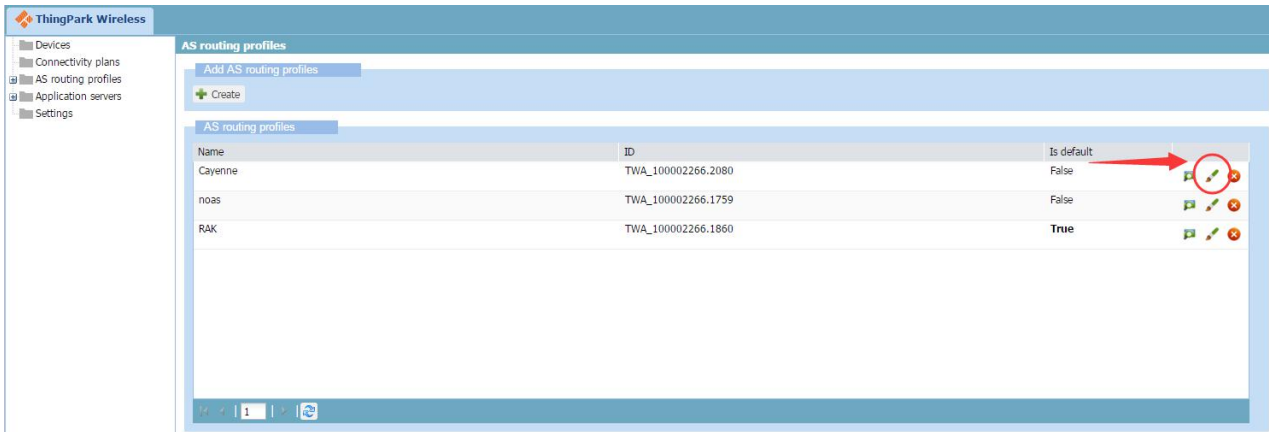

Give your profile an appropriate name, such as "Cayenne" so that you can refer to it later when you configure your devices. After giving your profile a name, you will see the *AS Routing Profile* screen. Click on the **Add** button located in the **Destinations** section.
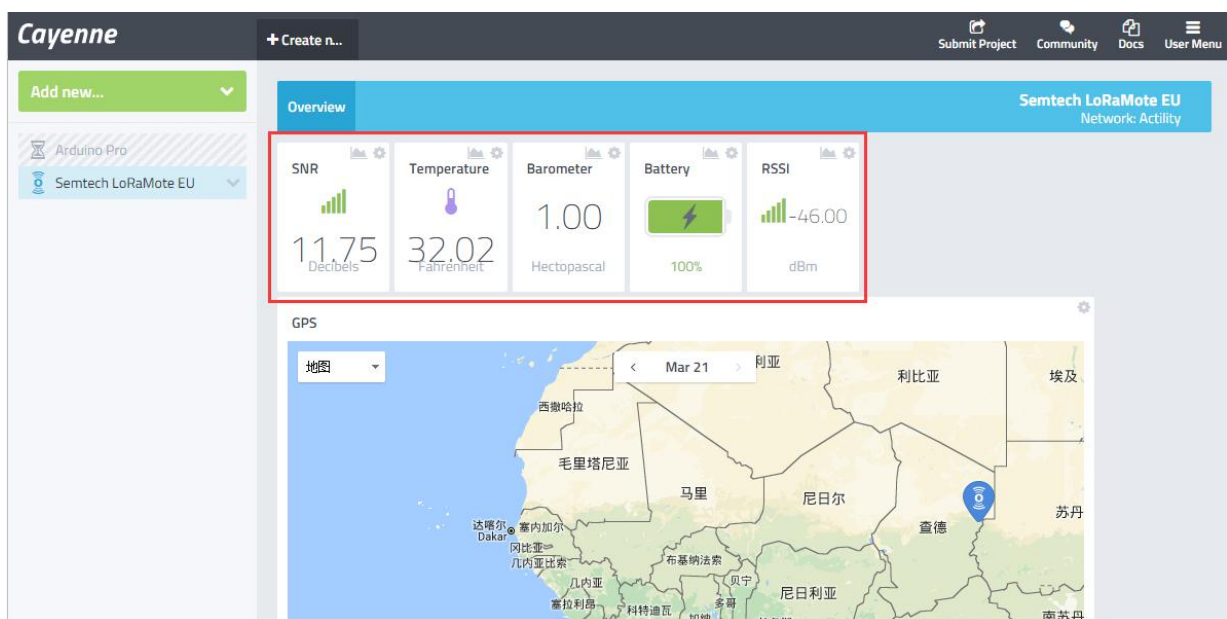
From the **Add Destinations** dialog that appears, be sure that the **Type** drop down is set to **Application Server**. In the **Destinations** drop down, be sure to select the Application Server you created earlier for Cayenne.
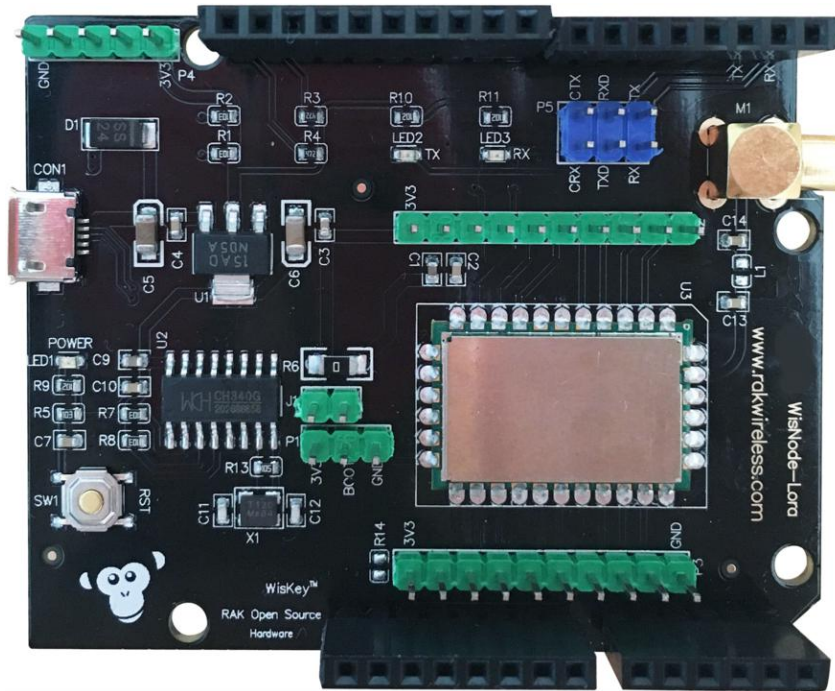
Click on " ✎ " icon， and check "Is default" take effect the AS routing profiles of Cayenne. Then click this URL https://cayenne.mydevices.com/cayenne/dashboard/ sign in you own Cayenne Dashbord as shown in the following picture. we can see some parameters in the form of icons.and it shows our RAK811(Lora) connect on the Cayenne.

Now,we can send the AT command through the Lora module to simulate the data changes.
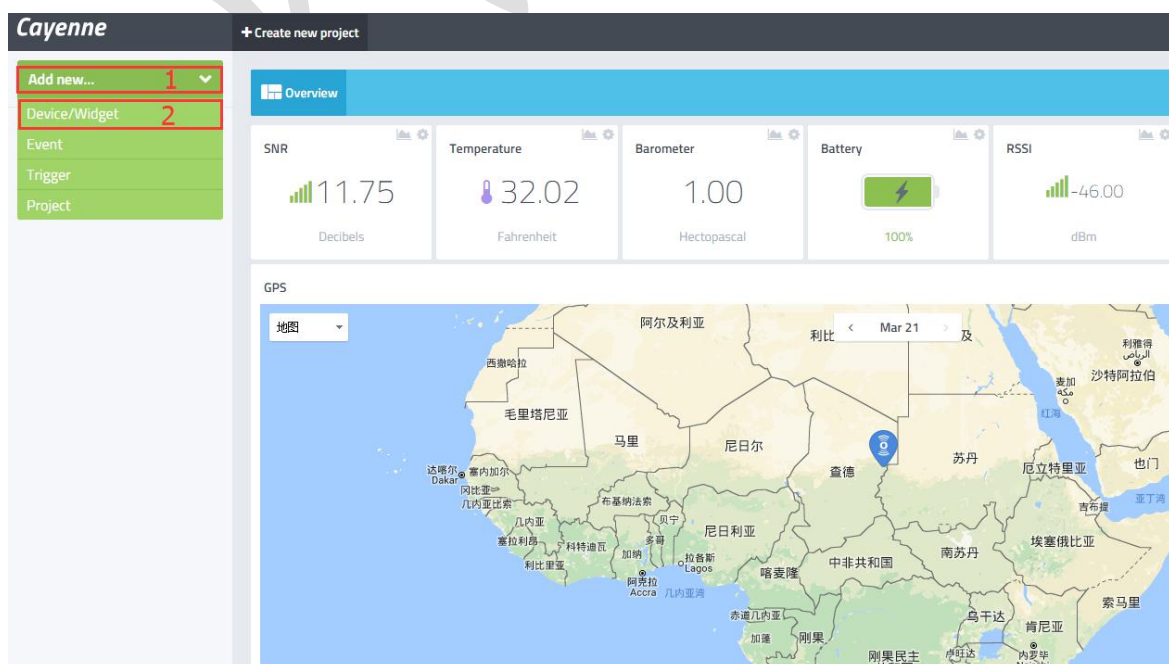
3. Connect RAK811(Lora) to Cayenne

In this part, I will use WisNode-Lora EVB to demonstrate how to add our LoRa RAK811 module to Cayenne(If your computer can not find the USB serial drivers, please click here to download http://www.rakwireless.com/en/download/WisNode%20LoRa/Tools);
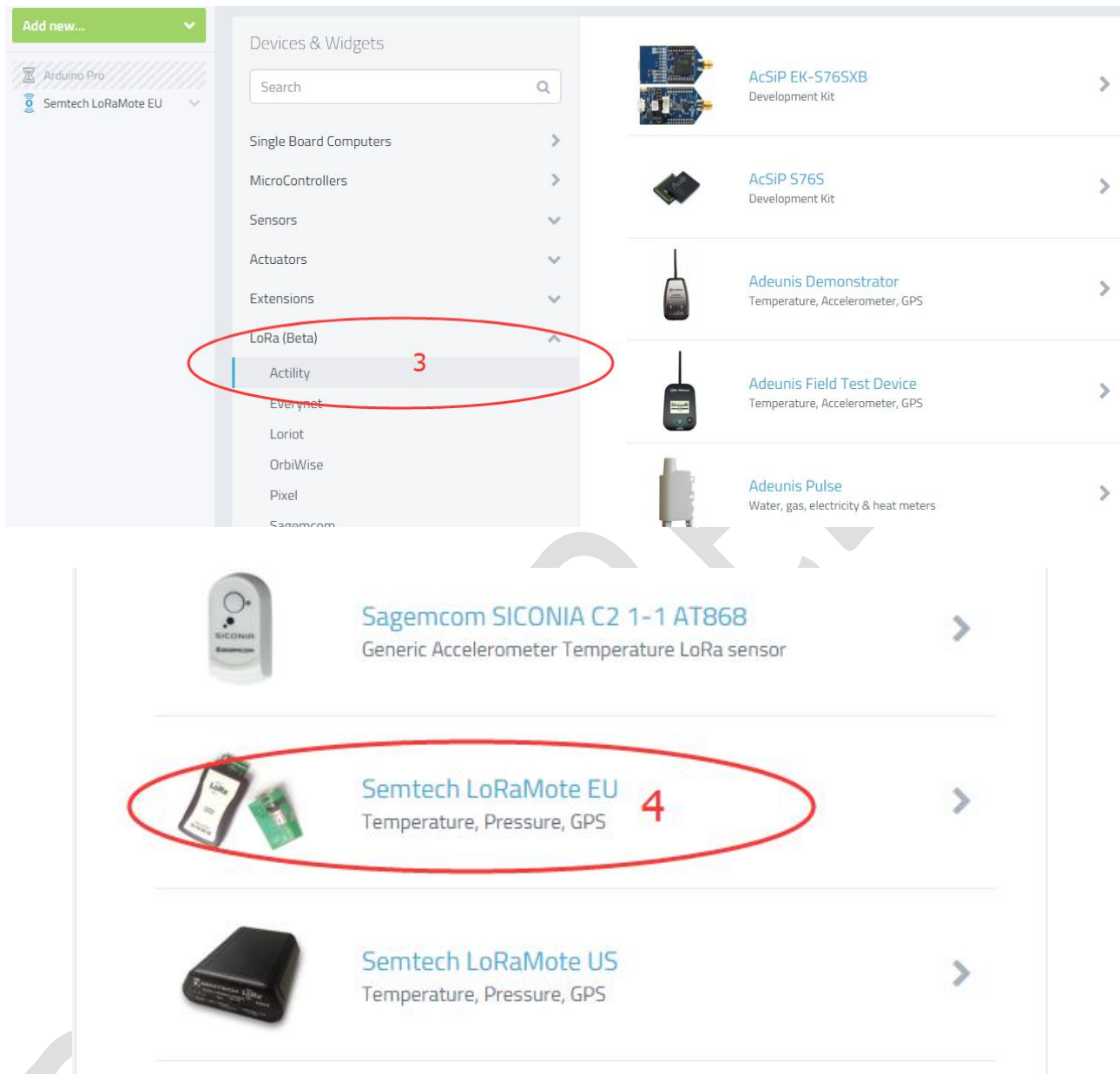

RAK WisNode-Lora EVB

Step 1:Click "Add new.." ;
Step 2:Click "Device/Widget"

Step 3: Chose "Lora(Beta)" > "Actility";

Step 4: Chose "Semtech LoRaMote EU";

Step 5:Fill in the following list according to your RAK811's parameters:

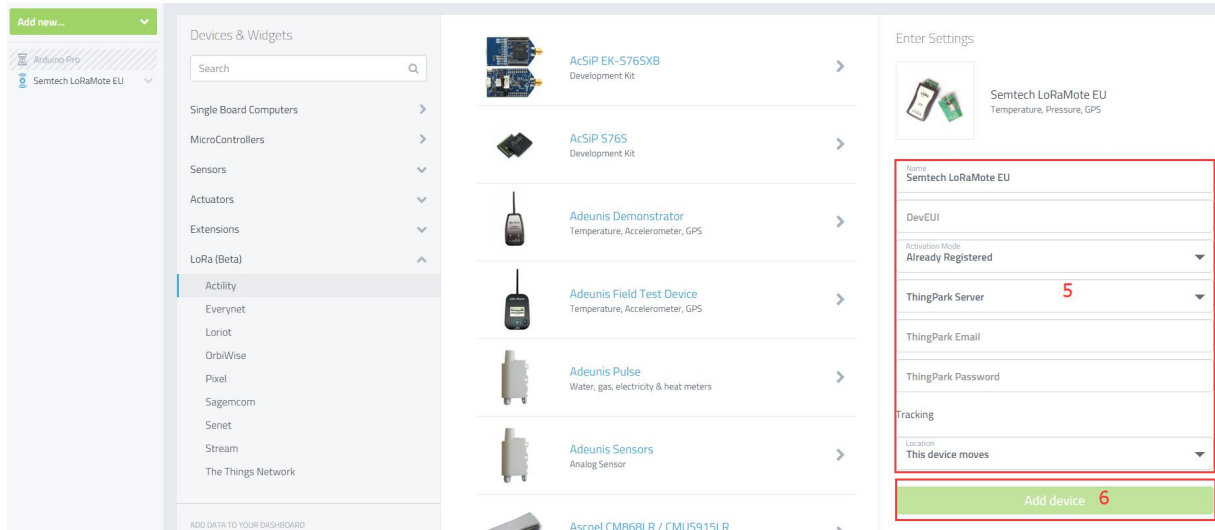**Name**:You can rename the RAK811 module or default;

DevEUI:Fill in module DevEUI;

ThingPark Server:Open your ThingPark Device Manage page,Page address will show your server name;

ThingPark Email & Password:Is Your used to register the Actility platform Email and password;

Tracking: You can choose "This device moves" or "This device doesn't move" and fill in address;

Step 6: Click "Add device", finish add new device;

4. Modify Record

Version	Author	Data	Modify content
V1.0	Wenyong.tang	2017/03/21	Create Document