

开源 LoRa NS 的安装与配置

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采用的开源 NS 来自于此项目：

<https://github.com/gotthardp/lorawan-server>

1 安装 Erlang 运行环境

1.a Debian/Ubuntu 等系统:

```
wget https://packages.erlang-solutions.com/erlang-solutions_1.0_all.deb
```

```
dpkg -i erlang-solutions_1.0_all.deb
```

```
apt-get update
```

```
apt-get install erlang
```

1.b CentOS 等系统:

```
yum install erlang
```

2. 下载 NS:

```
wget https://github.com/gotthardp/lorawan-server/releases/download/v0.6.7/lorawan-server-0.6.7.tar.gz
```

3. 解压以及运行 NS:

```
mkdir ~/lorawan-server
```

```
mv lorawan-server-0.6.7.tar.gz ~/lorawan-server/
```

```
cd ~/lorawan-server
```

```
tar -zxvf lorawan-server-0.6.7.tar.gz
```

```
bin/lorawan-server
```

4. 网页配置登录信息:

http://<ip>:8080 (admin/admin)

5. 网页配置:

注意:

1. 以下页面均通过点击右上角的“Create”来打开。

5.1 Infrastructure:

Areas: 区域设置 (如 cn470)

Gateways: 注册网关

Networks: 用于某一特定目的的网络

5.2 Devices:

Groups: 相当于“应用”，必须属于某个“Network”。

Profiles: 对某一类设备的设置

Commissioned: 用于注册 OTAA 设备 (Basics Modem 只支持这种方式)

Activated: 用于注册 ABP 设备 (Basics Modem 不支持; 可忽略)

5.3 Frames:

检查接收到的包信息

补充信息:

- 配置文件路径: releases/0.6.7/sys.config
- 停止 NS 服务: bin/lorawanctl stop

配置截图如下:

Server >

Infrastructure >

Areas

Gateways

Networks

Multicast Channels

Devices >

Backends >

Frames

Create new area

Name *

Administrators

Slack Channel

Log Ignored? ☒ true

Server >

Infrastructure >

Areas

Gateways

Networks

Multicast Channels

Devices >

Backends >

Handlers

Connectors

Frames

Create new gateway

General

MAC *

Area

TX Chain *

Antenna Gain (dBi)

Description

Location *

Areas

Gateways

Networks

Multicast Channels

Devices >

Backends >

Handlers

Connectors

Frames

General ADR Channels

Name *

NetID *

Region *

Coding Rate *

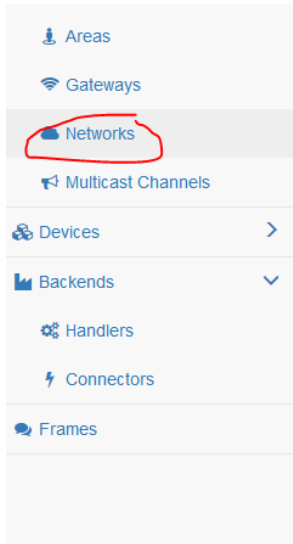
RX1 Join Delay (s) *

RX2 Join Delay (s) *

RX1 Delay (s) *

RX2 Delay (s) *

Gateway Power (dBm) *



General **ADR** Channels

Max EIRP (dBm) * 19

Max Power * Max

Min Power * Max - 14 dB

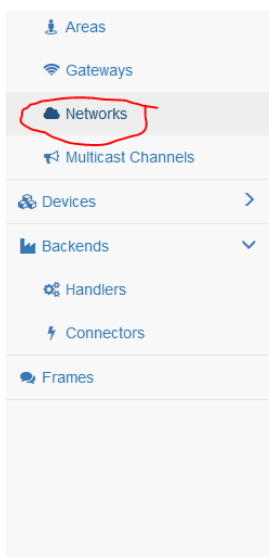
Max Data Rate * SF7 125 kHz (5470 bit/s)

Initial Duty Cycle 1 (100%)

Initial RX1 DR Offset * 0

Initial RX2 DR * SF12 125 kHz (250 bit/s)

Initial RX2 Freq (MHz) * 505.3

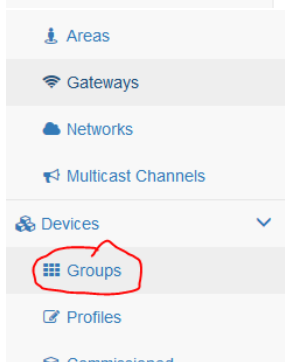


General ADR **Channels**

Initial Channels * 1

Channels	Frequency (MHz) *
	470.3
Min Data Rate	0
Max Data Rate	5

Frequency (MHz) *	470.5
Min Data Rate	0
Max Data Rate	5



Name * cn470_group

Network * cn470_network

SubID e.g. 0:3

Administrators Filter values

Slack Channel

Can Join? true

Server

- Users
- Servers
- Configuration
- Events

Infrastructure

- Areas
- Gateways
- Networks
- Multicast Channels

Devices

- Groups
- Profiles**
- Commissioned
- Activated (Nodes)
- Ignored

Edit profile #basic-modem-profile

General ADR

Name *	basic-modem-profile
Group *	cn470_group
Application *	basics_modem
App Identifier	
Join	Allowed
FCnt Check	Strict 16-bit
TX Window	Auto

✓ Save changes

Areas

- Gateways
- Networks
- Multicast Channels

Devices

- Groups
- Profiles**
- Commissioned
- Activated (Nodes)
- Ignored

Backends

- Handlers
- Connectors

General ADR

ADR Mode	Disabled
Set Power	Filter values
Set Data Rate	Filter values
Max Data Rate	Filter values
Set Channels	e.g. 0-2
Set Duty Cycle	e.g. 100%
Set RX1 DR Offset	e.g. 0
Set RX2 DR	Filter values
Set RX2 Freq (MHz)	
Request Status?	true

添加节点（OTAA 方式）：

Server

Infrastructure

Devices

Groups

Profiles

Commissioned

Activated (Nodes)

Ignored

Backends

Handlers

Connectors

Frames

Edit device

DevEUI *

Profile *

App Arguments

AppEUI

AppKey *

Description

Last Joins

basic-modem-profile

e.g. 0123456789ABCDEF

node for test from viki and Blaise

Time

2021-05-24 17:43:40

2021-05-21 16:46:59

查看结果的页面：

lorawan@loralab Admin

Server

Users

Servers

Configuration

Events

Infrastructure

Areas

Gateways

Networks

Multicast Channels

Devices

Groups

Profiles

Commissioned

Activated (Nodes)

Ignored

Backends

Dashboard

12:03

12:04

Thu 5 March

Servers

Name

Version

lorawan@loralab

0.6.7

Events

Last Occurred

Entity

Eid

2020-03-05 11:40:23

gateway

0016C001FF

2020-03-05 11:40:00

device

D896E0FF0C

Server

Infrastructure

Devices

Backends

Frames

Frames

Dir

Time

2020-03-05 10:56:11

2020-03-05 02:56:05

2020-03-04 19:34:07

2020-03-04 19:34:06

2020-03-04 19:33:58

2020-03-04 19:33:58

2020-03-04 19:33:52

2020-03-04 19:33:52

2020-03-04 19:33:43

或者