# Installation & Configuring the Network

### Open5gs:

## Install Open5GS with a Package Manager:

sudo apt update

sudo apt install software-properties-common

sudo add-apt-repository ppa:open5gs/latest

sudo apt update

sudo apt install open5gs

## Install the WebUI of Open5GS:

sudo apt update

sudo apt install curl

curl -fsSL https://deb.nodesource.com/setup\_14.x | sudo -E bash -

sudo apt install nodejs

curl -fsSL https://open5gs.org/open5gs/assets/webui/install | sudo -E bash -

## Configuration:

Configure the *mme.yaml* and *sgwu.yaml* file.

(For reference consider the files in *Configuration Files/Open5gs* folder.)

## Register Subscriber Information:

Connect to **http://localhost:3000** and login with admin account.

*Username: admin*

*Password: 1423*

To add subscriber information, you can do WebUI operations in the following order:

1. Go to Subscriber Menu.
2. Click **+** Button to add a new subscriber.
3. Fill the **IMSI**, security context (**K, OPc, AMF**) of the subscriber.

(Note: the security context of the subscriber can be found in *ue.conf* file.)

1. Click **SAVE** Button

### eNodeB & UE:

*(Note: Installation of eNodeB & UE was done in Ubuntu 18.04.)*

## Install essential libraries:

sudo apt-get install build-essential cmake libfftw3-dev libmbedtls-dev libboost-program-options-dev libconfig++-dev libsctp-dev libtool

## Install libzmq:

git clone https://github.com/zeromq/libzmq.git

cd libzmq

./autogen.sh

./configure

make

sudo make install

sudo ldconfig

## Install czmq:

git clone https://github.com/zeromq/czmq.git

cd czmq

./autogen.sh

./configure

make

sudo make install

sudo ldconfig

## Download and build srsRAN:

git clone https://github.com/srsRAN/srsRAN.git

cd srsRAN

mkdir build

cd build

cmake ../

make

make test

sudo make install

sudo srsran\_install\_configs.sh user

## Creating UE:

sudo ip netns add ue1

## Configuration:

Configure the *enb.conf* and *ue.conf* file.

(For reference consider the files in *Configuration Files/srsLTE* folder.)