Raspberry Pi version of EPC:

1. Install Ubuntu Server 18.04 for Raspberry Pi 4:

<http://cdimage.ubuntu.com/ubuntu/releases/18.04.5/release/>

[ubuntu-18.04.5-preinstalled-server-arm64+raspi4.img.xz](http://cdimage.ubuntu.com/ubuntu/releases/18.04.5/release/ubuntu-18.04.5-preinstalled-server-arm64+raspi4.img.xz)

I followed these instructions:

<https://maker.pro/raspberry-pi/projects/install-ubuntu-18044-lts-on-your-raspberry-pi-board>

Chosen username:

Chosen password:

1. Disable Cloud Init!! Very important- otherwise the pi4 often hangs while booting

<https://www.blackmoreops.com/2019/04/19/remove-cloud-init-from-ubuntu/>

<https://cloudinit.readthedocs.io/en/latest/topics/boot.html#generator>

<https://gist.github.com/zoilomora/f862f76335f5f53644a1b8e55fe98320>

1. Install ubuntu mate desktop (useful for eNB browser gui management)

<https://linuxconfig.org/how-to-install-mate-desktop-on-ubuntu-18-04-bionic-beaver-linux>

1. ~~Clone open5gs github repo:~~ [~~https://github.com/open5gs/open5gs~~](https://github.com/open5gs/open5gs)
2. Follow steps from here:
   1. You will have to build open5gs from source: [https://open5gs.org/open5gs/docs/guide/02-building-open5gs-from-sources](https://open5gs.org/open5gs/docs/guide/02-building-open5gs-from-sources/)
   2. Follow the steps until you do this step
      1. $ cd build
      2. $ ninja install
      3. $ cd ../
3. Setting up open5gs 4G architecture:
   1. <https://github.com/open5gs/open5gs/issues/621>
   2. Modify the config files at $INSTALL\_LOC/install/etc/open5gs/x.yaml where x=mme, sgwu
      1. $INSTALL\_LOC/install/etc/open5gs/mme.yaml
      2. $INSTALL\_LOC/install/etc/open5gs/sgwu.yaml
      3. <https://open5gs.org/open5gs/docs/guide/01-quickstart/> (see 4G setup)
      4. change the IP addresses of the SGW and MME to match our setup, mme=192.168.150.2
   3. Will need to run the following processes in install/bin/: open5gs-hssd, -mmed, -sgwcd, -smfd, -sgwud, -upfd, -pcrfd. Always run hssd first because mme depends on it.
   4. I will add more details on the open5gs config later, we need some 4G architecture diagrams
4. Note: remember to disable suspend/hibernate if that is on!