GNU Radio Installation Manual

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1   Pre-requisites

- Laptop with Ubuntu 16.04 LTS.

- 14.04 LTS will also work, but we suggest to upgrade to 16.04 for installing stable and bug-free version of GNU Radio.

2   Installation Steps

- First you need to install Synaptic Package Manager. Those who already have it installed may skip this step.

  On the terminal, type the following commands:
  sudo apt-get update
  sudo apt-get upgrade
  sudo apt-get install synaptic

- Now, open Synaptic Package Manager. On the search tab, type gnuradio.

- Select gnuradio package and mark for installation.

- Select Mark option for additional required changes. Click on Apply.

- The installation may take approximately 3-5 minutes.

3   Run GNU Radio

- To run GNU Radio, open the terminal and type in gnuradio-companion.

- For 16.04 users, you will get stable 3.7.9 version of GNU Radio.

4   RTL Dongle Configuration

- RTL-SDR Dongle needs to be configured before using with GNU Radio.

- Open Synaptic Package Manager again. Search for gr-osmosdr.

- Check the package, select mark additional required changes and click on Apply.

- This may take roughly 1-2 minutes.

- Now open gnuradio-companion as before and in the search box, type RTL. It should show 'RTL-SDR Source' block.

- Check the working of the 'RTL-SDR Source' block by connecting RTL-SDR Dongle to your system (to be done in the lab).

- If the dongle is not working do the following steps:

  1. Open a new terminal and type the command lines

     cd /etc/modprobe.d
     sudo nano blacklist.conf

  2. This will start your editor and put you into a blank file called 'blacklist.conf'. While you are in the editor type the following 3 lines:

     blacklist dvb_usb_rtl28xxu
     blacklist rtl2832
     blacklist rtl2830

  3. Save the file by pressing Ctrl+O (not zero) and press Enter. Press Ctrl+X to exit the editor.

  4. Now reboot your system from the terminal by typing the command sudo reboot.