

## Installation and Execution of ns-3

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### Installation:

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#### Step 1: Prerequisites

**\$ sudo apt update**

In the following packages, all the required dependencies are taken care and you can install all these packages for the complete use of ns3.

**\$ sudo apt install g++ python3 python3-dev pkg-config sqlite3 cmake python3-setuptools git qtbase5-dev qtchooser qt5-qmake qtbase5-dev-tools gir1.2-goocanvas-2.0 python3-gi python3-gi-cairo python3-pygraphviz gir1.2-gtk-3.0 ipython3 openmpi-bin openmpi-common openmpi-doc libopenmpi-dev autoconf cvs bzip2 unrar gsl-bin libgsl-dev libgslcblas0 wireshark tcpdump sqlite3 libsqlite3-dev libxml2 libxml2-dev libc6-dev libc6-dev-i386 libclang-dev llvm-dev automake python3-pip libxml2 libxml2-dev libboost-all-dev**

Step 2 : Download ns-allinone-3.36.1.tar.bz2 from the website nsnam.org.

<https://www.nsnam.org/releases/ns-all...>

you can also use the below command to download the file

**\$ wget https://www.nsnam.org/releases/ns-allinone-3.36.1.tar.bz2**

Step 3 : Unzip the above file content to the home folder (in my case, its /home/<user\_name>) - Check your home folder and do it accordingly.

To unzip use the GUI with Right click and extract and select the /home/<user\_name>/ folder.

else you can use the command

**\$ tar jxvf ns-allinone-3.36.1.tar.bz2**

Step 4: Go to the folder

**\$ cd ns-allinone-3.36.1/**

**\$ ./build.py --enable-examples --enable-tests**

This process takes some time depends on the Speed of your system.

Once the installation is done. You can run the example as shown

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### Executing a sample code:

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**\$ cd ns-3.36.1/**

**\$ ./ns3 run hello-simulator**

Hello Simulator

(You will get this output)

To run the examples, we need to copy the examples/tutorial/first.cc to the scratch folder and execute the file as shown below

To run C++ (.cc) file, the following command is used.

**\$ ./ns3 run scratch/first**