Mawlana Bhashani Science and Technology University

Lab-Report

Report No: 0

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Course title: Wireless and Mobile Communication Lab

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LAB NO.:0

Name of Experiment: NS-3 Installation On Linux platform.

Objectives:

1. To install and setup NS-3 application.
2. To learn using NS-3 on linux platform.
3. To run some basic codes using NS-3 application.

NS-3 installation & running scripts:

NS-3 is most preferable for Linux(Ubuntu/Mint).so, here's the installation process for ubuntu/Mint is given.

Step 1: installing libraries:

open Terminal (ctrl+Alt+T) & run the following commands one after one. if it requires (Y/N) anytime, then simply write Y & press 'Enter' button.

sudo apt-get install gcc g++ python python3

sudo apt-get install gcc g++ python python3 python3-dev

sudo apt-get install python3-setuptools git mercurial

sudo apt-get install qt5-default mercurial

sudo apt-get install python-pygraphviz python-kiwi python-pygoocanvas libgoocanvas-dev ipython

sudo apt-get install gir1.2-goocanvas-2.0 python-gi python-gi-cairo python-pygraphviz python3-gi python3-gi-cairo python3-pygraphviz gir1.2-gtk-3.0 ipython ipython3

sudo apt-get install openmpi-bin openmpi-common openmpi-doc libopenmpi-dev

sudo apt-get install autoconf cvs bzr unrar

sudo apt-get install gdb valgrind

sudo apt-get install uncrustify

sudo apt-get install doxygen graphviz imagemagick

sudo apt-get install texlive texlive-extra-utils texlive-latex-extra texlive-font-utils texlive-lang-portuguese dvipng latexmk

sudo apt-get install python3-sphinx dia

sudo apt-get install gsl-bin libgsl-dev libgsl23 libgslcblas0

sudo apt-get install tcpdump

sudo apt-get install sqlite sqlite3 libsqlite3-dev

sudo apt-get install libxml2 libxml2-dev

sudo apt-get install cmake libc6-dev libc6-dev-i386 libclang-6.0-dev llvm-6.0-dev automake pip

python3 -m pip install --user cxxfilt

sudo apt-get install libgtk2.0-0 libgtk2.0-dev

sudo apt-get install vtun lxc uml-utilities

sudo apt-get install libboost-signals-dev libboost-filesystem-dev

Step 2: Download NS-3 & extract:

download the ns3 from here:

https://drive.google.com/file/d/1vRMryHof4cBH0Zs4Z3WbxpayM3nLMaTP/view?usp=sharing

now place the file in home folder:

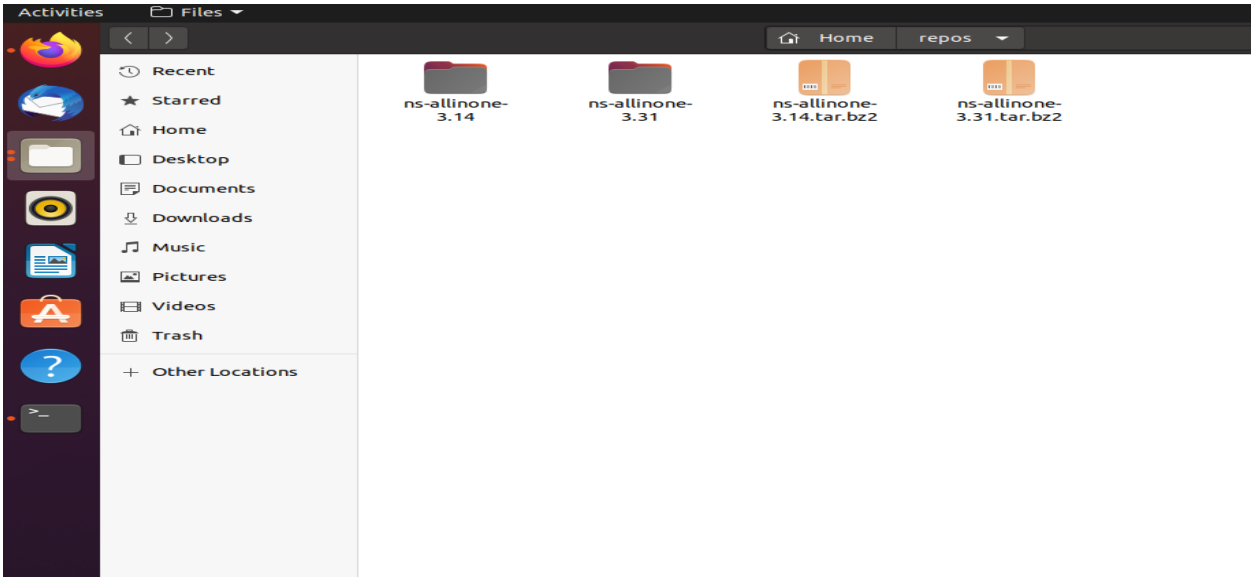

FIGURE: Home folder (here the downloaded file must be put.)

Open Terminal (ctrl+Alt+T) & run the following commands:

echo $HOME

tar jxvf ns-allinone-3.30.tar.bz2

it will extract the ns3 folder ... now we have to run the commands..

cd ns-allinone-3.30

./build.py --enable-examples --enable-test

it will take about 30 minutes... :) .. keep patience..

go to the folder.. home/ns-allinone-3.30/ns-3.30/examples/tutorial ..& copy the files..

first.cc , first.py

& paste them into.. /home/ns-allinone-3.30/ns-3.30/scratch .. folder.

now, you are ready to run your fisrt lab code first.cc

Step 3: Running first script(first Lab code):

cd

cd ns-allinone-3.30/ns-3.30

run the .cc file:

./waf --run scratch/first

Fig: Successfully running first.cc file

Conclusion: Here, in this experiment, NS-3 application was successfully installed on linux platform and the first program was successfully built and run.