CYBERTRAINING RESOURCES

Installing Mininet

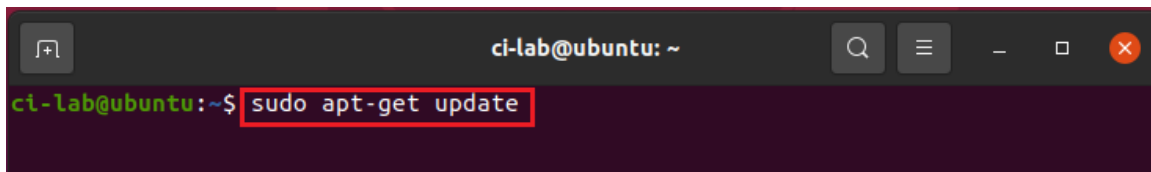**Document Version: 06-20-2021**

Contents

This short guide describes the steps required to install Mininet on a Linux. The guide assumes that you are running a recent version of Ubuntu. The version of Linux used in this guide is Ubuntu 20.04.2 LTS.

1   Installing Mininet from packages

Step 1. Launch a Linux terminal by holding the `Ctrl+Alt+T` keys or by clicking on the Linux terminal icon.
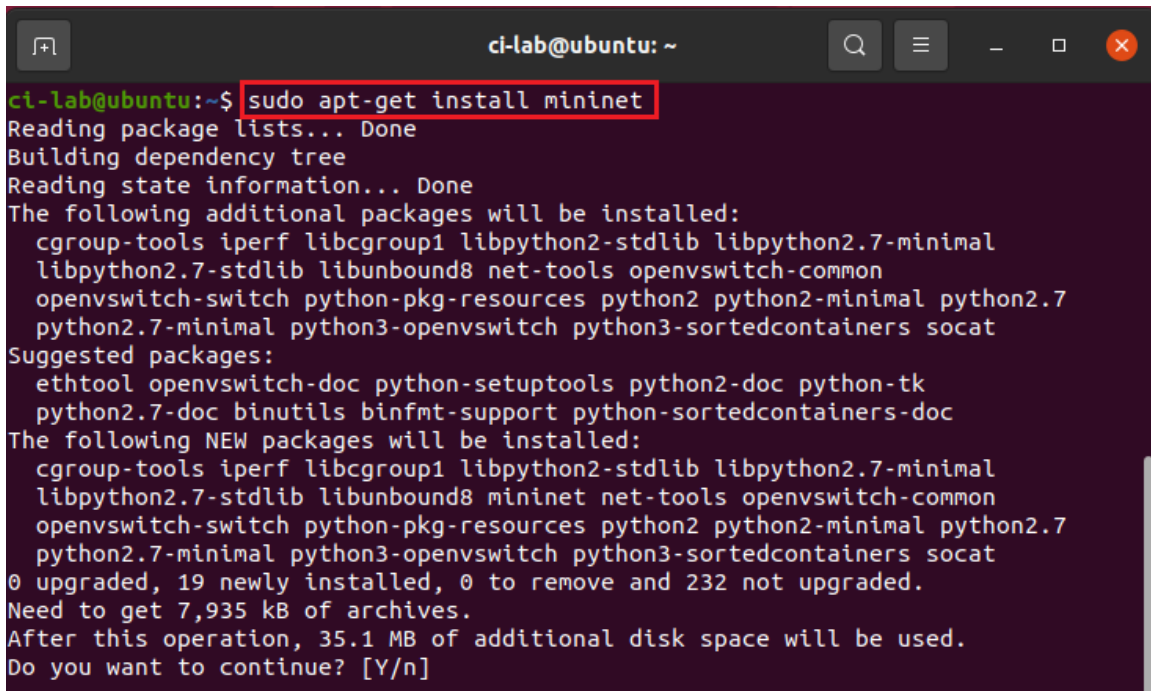
Step 2. Make sure that the list of packages from all repositories is up to date by running the following command. When prompted to enter a password, please enter the password of the account you are currently logged into.

```
sudo apt-get update
```


Step 3. Install the *mininet* package by entering the following command.

```
sudo apt-get install mininet
```


Press Y key on your keyboard to proceed with the installation.

Step 4. At this point, if there was no error during the installation process, you should have *mininet* installed on your machine. Issue the following command to start *mininet's* Command Line Interface (CLI). This command creates a simple topology consisting of one switch (s1) and two hosts (h1, h2).
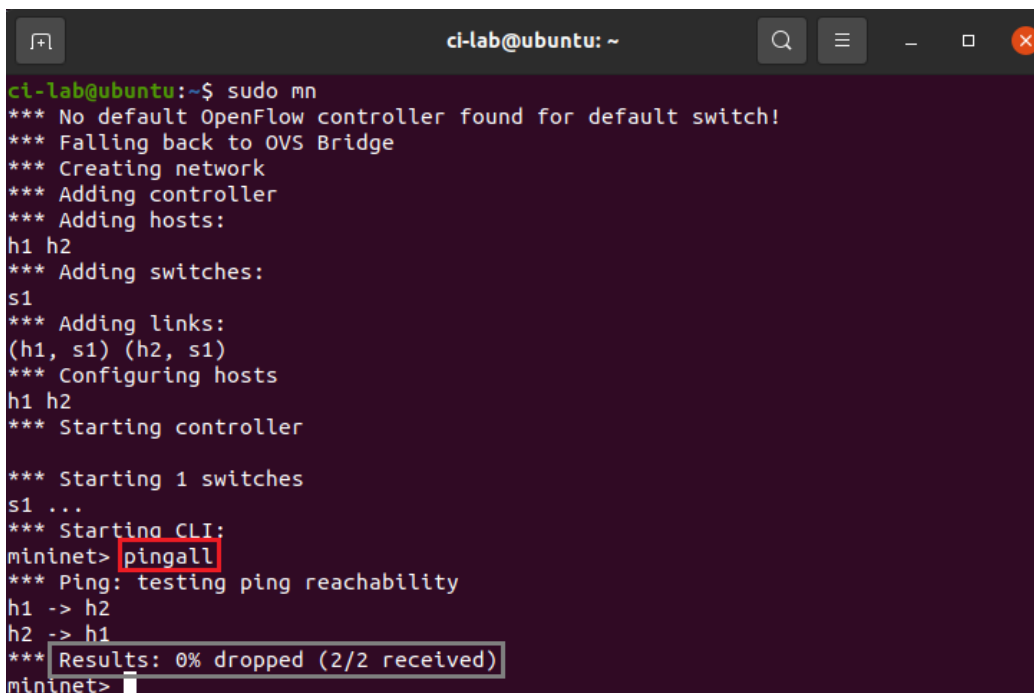
```
sudo mn
```


Step 5. By default, the Open vSwitch (OVS) package is installed when installing *mininet*. OVS is the virtual switch that will be used to connect devices in *mininet*. To test if mininet is working properly, issue the following command in mininet's CLI.
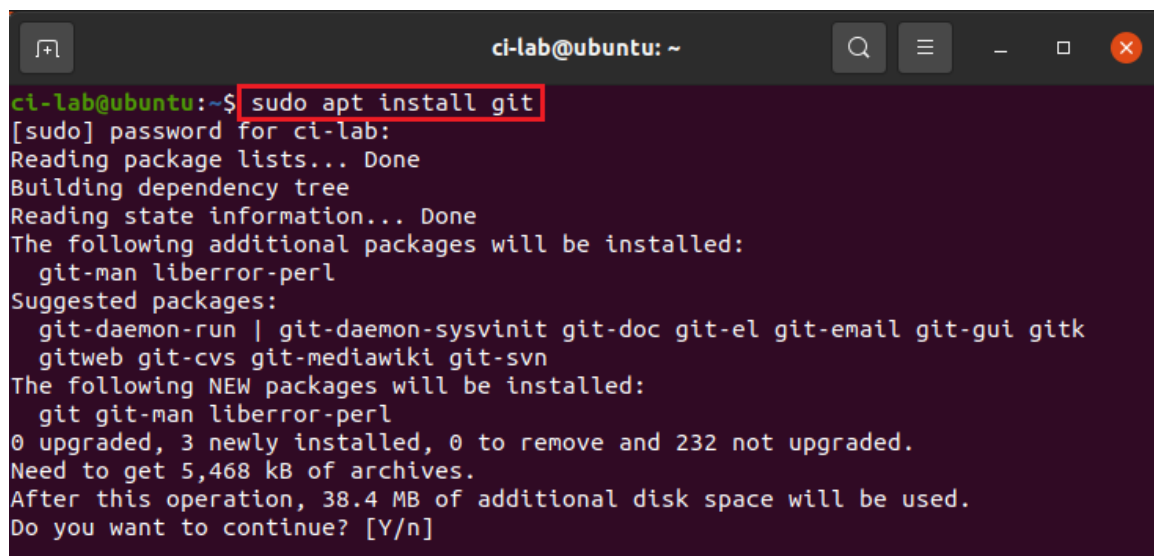
```
mininet> pingall
```

The figures above shows that h1 was able to reach h2 and h2 was able to reach h1. It also shows that 0% packets were dropped. This confirms that mininet and the virtual switch are properly installed.

2   Using Miniedit

Mininet has a Graphical User Interface (GUI) known as Miniedit. Miniedit is a simple python program that provides a GUI which allows creating and managing topologies.

Step 1. Install *git* in case it is not installed on your machine by using the following command.

```
sudo apt-get install git
```


Step 2. Clone the mininet repository from GitHub by using the following command on a Linux terminal.

```
git clone https://github.com/mininet/mininet
```


Step 3. Install python-pip3 package in case it is not installed on your system.

```
sudo apt install python3-pip
```

Step 4. Install *mininet* using pip3 by entering the following command.

```
sudo pip3 install mininet
```


Step 5. Install tkinter by entering the following command
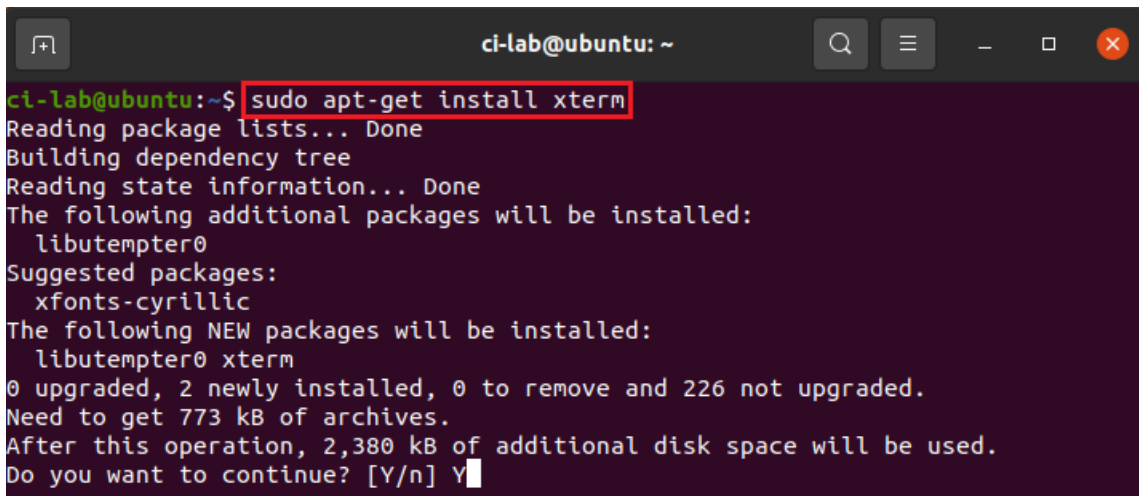
```
sudo apt-get install python3-tk
```

Step 6. Install *xterm* package by entering the following command.
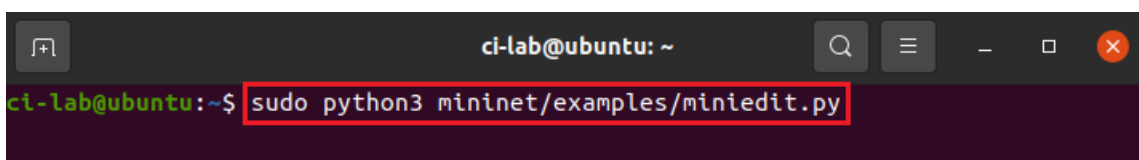
```
sudo apt-get install xterm
```


Step 7. Check if Miniedit is ready to be started. Start Miniedit by entering the following command.

```
sudo python3 mininet/examples/miniedit.py
```

If the output is similar to the figure above, then Miniedit is ready.

References

1. Mininet walkthrough. [Online]. Available: http://Mininet.org.
2. Mininet Github repo. [Online]. Available: https://github.com/mininet/mininet