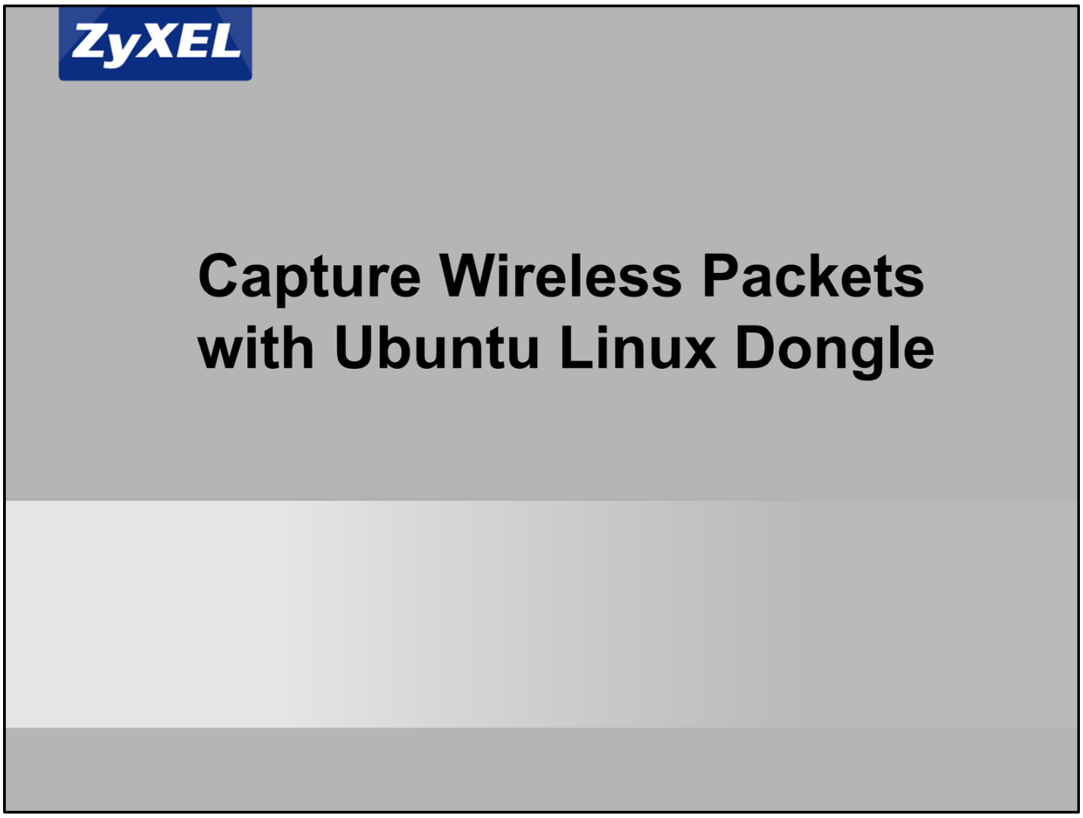
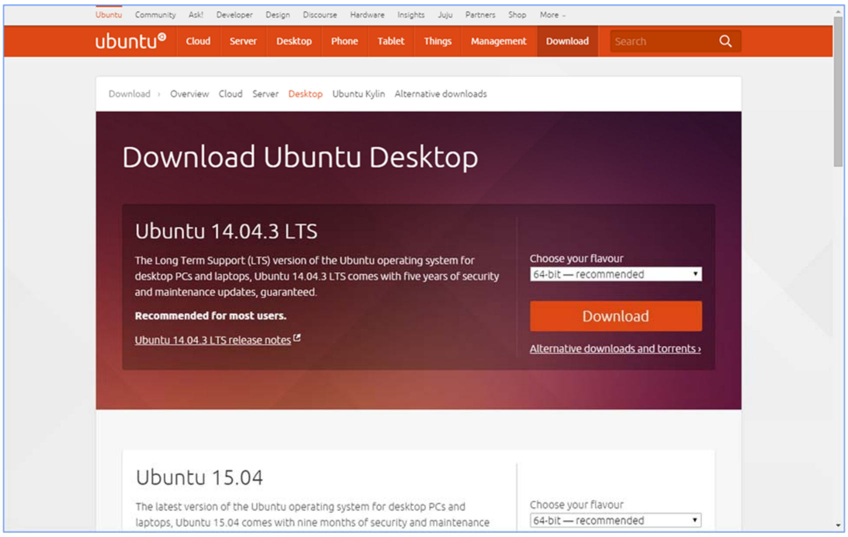


Capture Wireless Packets with Ubuntu Linux Dongle

Step 1. Download Ubuntu

- Goto http://www.ubuntu.com/download/desktop



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Download Ubuntu Desktop

Ubuntu 14.04.3 LTS

The Long Term Support (LTS) version of the Ubuntu operating system for desktop PCs and laptops, Ubuntu 14.04.3 LTS comes with five years of security and maintenance updates, guaranteed.

Recommended for most users.

Ubuntu 14.04.3 LTS release notes

Choose your flavour: 64-bit — recommended

Download
Alternative downloads and torrents ›

Ubuntu 15.04

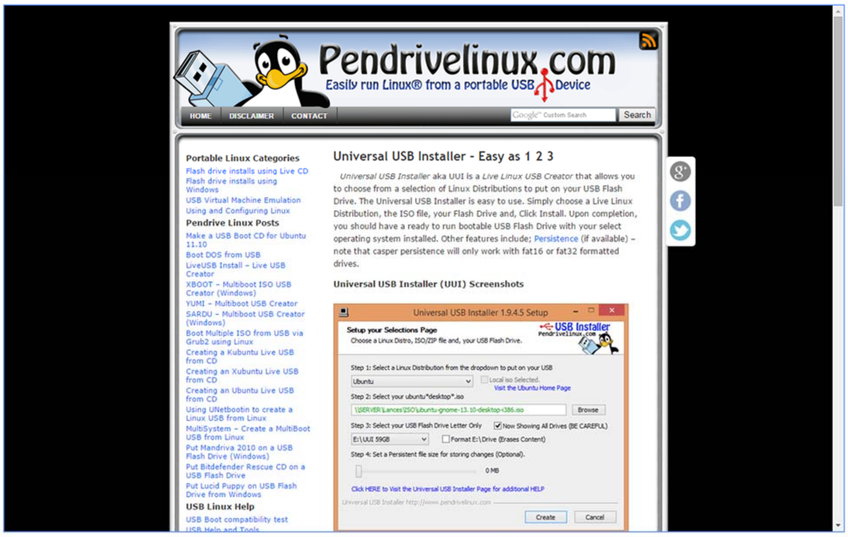
The latest version of the Ubuntu operating system for desktop PCs and laptops, Ubuntu 15.04 comes with nine months of security and maintenance

Choose your flavour: 64-bit — recommended

If you are not familiar with Linux, you can try with Ubuntu. If you are already a Linux user, you can select other Ubuntu flavor.

Step 2. Download UUI

- Goto http://www.pendrivelinux.com/universal-usb-installer-easy-as-1-2-3/



Portable Linux Categories

- Flash drive installs using Live CD
- Flash drive installs using Windows
- USB Virtual Machine Emulation
- Using and Configuring Linux

Pendrive Linux Posts

- Make a USB Boot CD for Ubuntu 11.10
- Boot DOS from USB
- LiveUSB Install – Live USB Creator
- XBOOT – Multiboot ISO USB Creator (Windows)
- YUMI – Multiboot USB Creator
- SARDU – Multiboot USB Creator (Windows)
- Boot Multiple ISO from USB via Grub2 using Linux
- Creating a Kubuntu Live USB from CD
- Creating an Xubuntu Live USB from CD
- Creating an Ubuntu Live USB from CD
- Using UNetbootin to create a Linux USB from Linux
- MultiSystem – Create a MultiBoot USB from Linux
- Put Mandriva 2010 on a USB Flash Drive (Windows)
- Put Bitdefender Rescue CD on a USB Flash Drive
- Put Lucid Puppy on USB Flash Drive from Windows

USB Linux Help

- USB Boot compatibility test
- USB Help and Tools

Universal USB Installer - Easy as 1 2 3

Universal USB Installer aka UUI is a *Live Linux USB Creator* that allows you to choose from a selection of Linux Distributions to put on your USB Flash Drive. The Universal USB Installer is easy to use. Simply choose a Live Linux Distribution, the ISO file, your Flash Drive and, Click Install. Upon completion, you should have a ready to run bootable USB Flash Drive with your select operating system installed. Other features include; Persistence (if available) – note that casper persistence will only work with fat16 or fat32 formatted drives.

Universal USB Installer (UUI) Screenshots

Universal USB Installer 1.9.4.5 Setup

Setup your Selections Page

Choose a Linux Distro, ISO/ZIP file and, your USB Flash Drive.

Step 1: Select a Linux Distribution from the dropdown to put on your USB

Ubuntu

□ Local iso Selected.

Visit the Ubuntu Home Page

Step 2: Select your ubuntu*desktop*.iso

\\SERVER\Lances\ISO\ubuntu-gnome-13.10-desktop-i386.iso

Step 3: Select your USB Flash Drive Letter Only ☑ Now Showing All Drives (BE CAREFUL)

E:\ UUI 59GB

□ Format E:\ Drive (Erases Content)

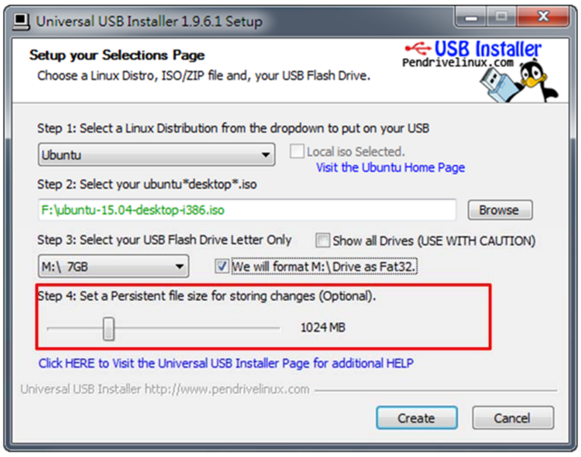
Step 4: Set a Persistent file size for storing changes (Optional).

0 MB

Click HERE to Visit the Universal USB Installer Page for additional HELP

Universal USB Installer http://www.pendrivelinux.com

Step 3. Create the USB Stick



Universal USB Installer 1.9.6.1 Setup

Setup your Selections Page

Choose a Linux Distro, ISO/ZIP file and, your USB Flash Drive.

Step 1: Select a Linux Distribution from the dropdown to put on your USB

Ubuntu

□ Local iso Selected.

Visit the Ubuntu Home Page

Step 2: Select your ubuntu*desktop*.iso

F:\ubuntu-15.04-desktop-i386.iso

Step 3: Select your USB Flash Drive Letter Only

□ Show all Drives (USE WITH CAUTION)

M:\ 7GB

☑ We will format M:\ Drive as Fat32.

Step 4: Set a Persistent file size for storing changes (Optional).

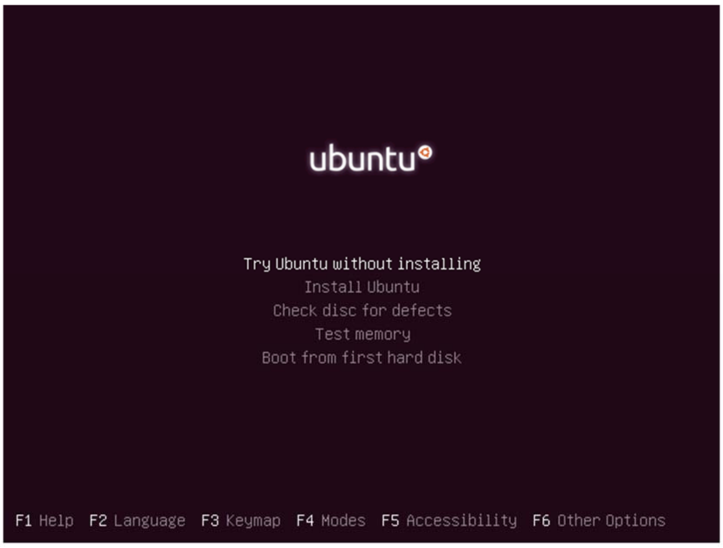
1024 MB

Click HERE to Visit the Universal USB Installer Page for additional HELP

Universal USB Installer http://www.pendrivelinux.com

Set a Persistent storage here because we need to install packages on USB drive and don’t want to do it every time.

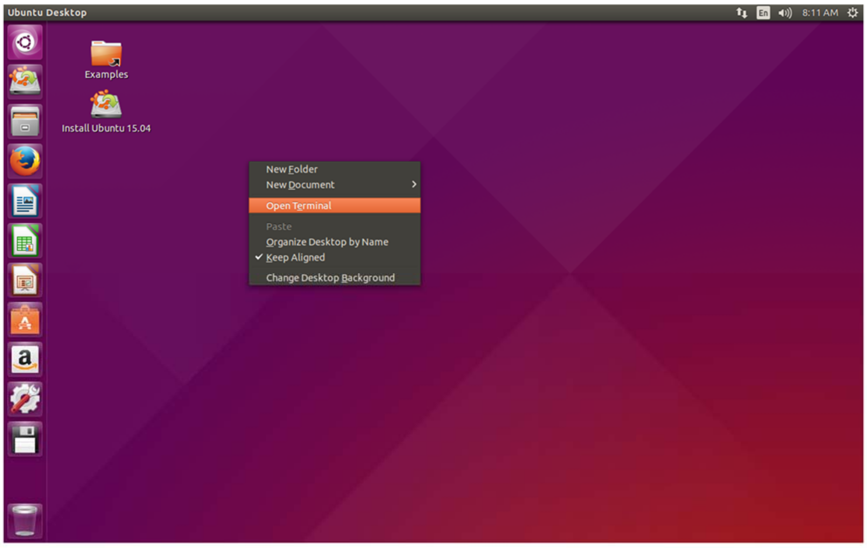
Step 4. Boot Up with USB



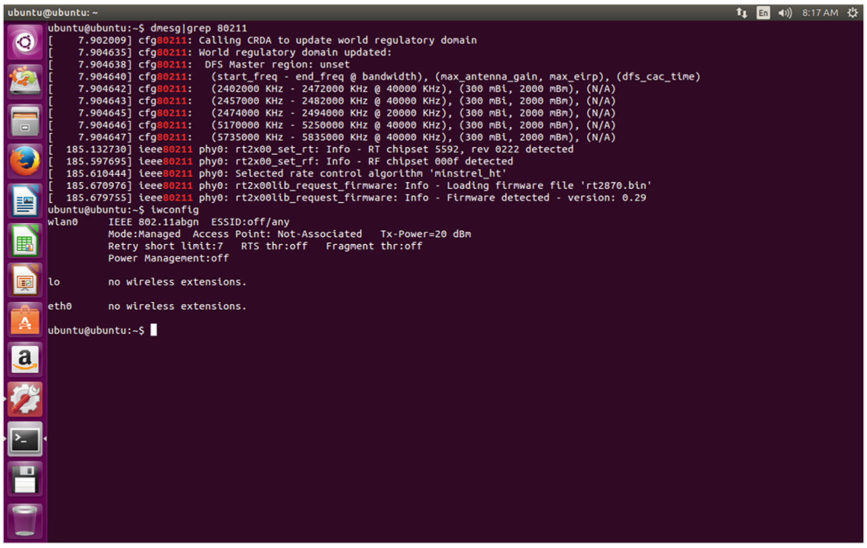
ubuntu
Try Ubuntu without installing
Install Ubuntu
Check disc for defects
Test memory
Boot from first hard disk
F1 Help F2 Language F3 Keymap F4 Modes F5 Accessibility F6 Other Options

Select “Try Ubuntu without installing” here to boot up Ubuntu Live USB. We will still be able to install packages on this USB stick later.

Step 5. Open a Terminal



Step 6. Check for WLAN Device



```
ubuntu@ubuntu:~$ dmesg|grep 80211
[    7.902009] cfg80211: Calling CRDA to update world regulatory domain
[    7.904635] cfg80211: World regulatory domain updated:
[    7.904638] cfg80211:  DFS Master region: unset
[    7.904640] cfg80211:   (start_freq - end_freq @ bandwidth), (max_antenna_gain, max_eirp), (dfs_cac_time)
[    7.904642] cfg80211:   (2402000 KHz - 2472000 KHz @ 40000 KHz), (300 mBi, 2000 mBm), (N/A)
[    7.904643] cfg80211:   (2457000 KHz - 2482000 KHz @ 40000 KHz), (300 mBi, 2000 mBm), (N/A)
[    7.904645] cfg80211:   (2474000 KHz - 2494000 KHz @ 20000 KHz), (300 mBi, 2000 mBm), (N/A)
[    7.904646] cfg80211:   (5170000 KHz - 5250000 KHz @ 40000 KHz), (300 mBi, 2000 mBm), (N/A)
[    7.904647] cfg80211:   (5735000 KHz - 5835000 KHz @ 40000 KHz), (300 mBi, 2000 mBm), (N/A)
[  185.132730] ieee80211 phy0: rt2x00_set_rt: Info - RT chipset 5592, rev 0222 detected
[  185.597695] ieee80211 phy0: rt2x00_set_rf: Info - RF chipset 000f detected
[  185.610444] ieee80211 phy0: Selected rate control algorithm 'minstrel_ht'
[  185.670976] ieee80211 phy0: rt2x00lib_request_firmware: Info - Loading firmware file 'rt2870.bin'
[  185.679755] ieee80211 phy0: rt2x00lib_request_firmware: Info - Firmware detected - version: 0.29
ubuntu@ubuntu:~$ iwconfig
wlan0     IEEE 802.11abgn  ESSID:off/any
          Mode:Managed  Access Point: Not-Associated   Tx-Power=20 dBm
          Retry short limit:7   RTS thr:off   Fragment thr:off
          Power Management:off

lo        no wireless extensions.

eth0      no wireless extensions.

ubuntu@ubuntu:~$ 
```

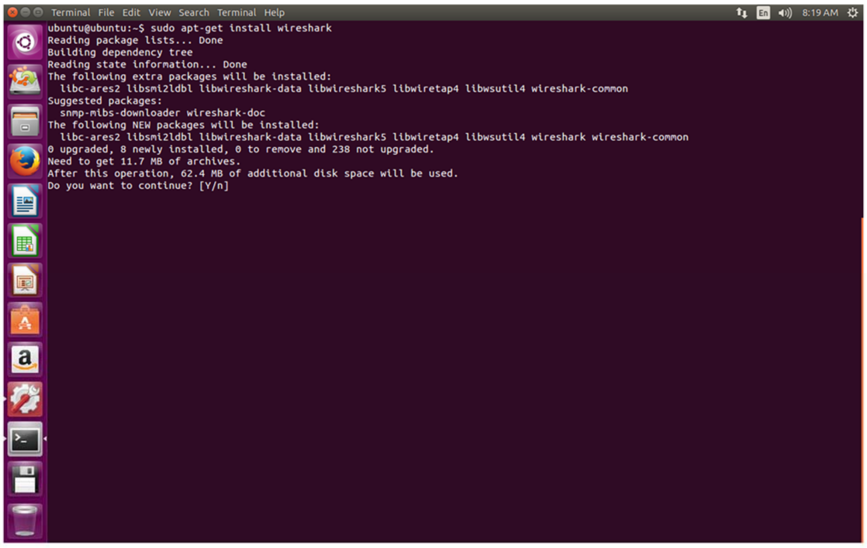
For Linux kernel supported Wi-Fi dongle list, please check at:
https://wikidevi.com/wiki/List_of_Wi-Fi_Device_IDs_in_Linux

Use the following command:
$ dmesg | grep '80211'

If you something comes out like 'phy0' here, it means your device is supported. If you cannot find anything, try (another) wireless dongle.

You can also use 'iwconfig' command to see if there is 'wlan0' listed.

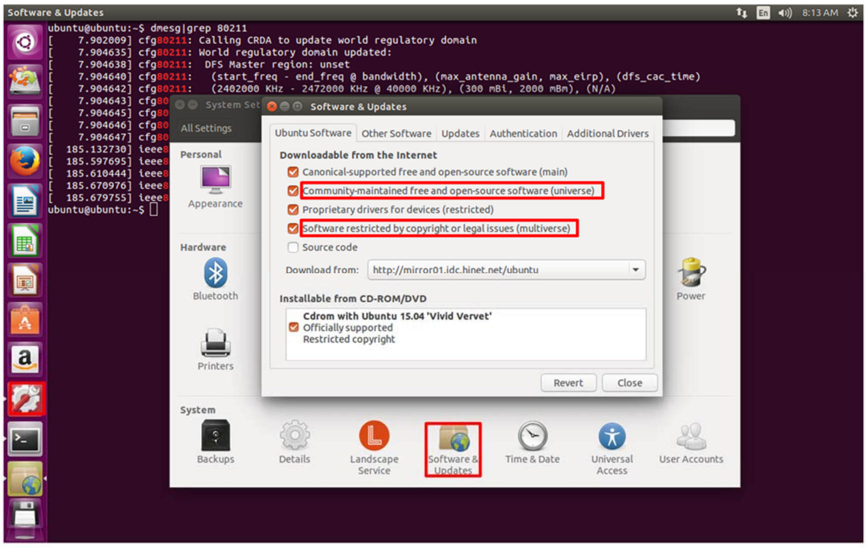
Step 7. Install Wireshark



```
ubuntu@ubuntu:~$ sudo apt-get install wireshark
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following extra packages will be installed:
  libc-ares2 libsmi2ldbl libwireshark-data libwireshark5 libwiretap4 libwsutil4 wireshark-common
Suggested packages:
  snmp-mibs-downloader wireshark-doc
The following NEW packages will be installed:
  libc-ares2 libsmi2ldbl libwireshark-data libwireshark5 libwiretap4 libwsutil4 wireshark wireshark-common
0 upgraded, 8 newly installed, 0 to remove and 238 not upgraded.
Need to get 11.7 MB of archives.
After this operation, 62.4 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

Use the following command to install Wireshark package:
$ sudo apt-get install wireshark

Step. 7a Select Extra Source



```
ubuntu@ubuntu:~$ dmesg|grep 80211
[    7.902009] cfg80211: Calling CRDA to update world regulatory domain
[    7.904635] cfg80211: World regulatory domain updated:
[    7.904638] cfg80211:  DFS Master region: unset
[    7.904640] cfg80211:   (start_freq - end_freq @ bandwidth), (max_antenna_gain, max_eirp), (dfs_cac_time)
[    7.904642] cfg80211:   (2402000 KHz - 2472000 KHz @ 40000 KHz), (300 mBi, 2000 mBm), (N/A)
[    7.904643] cfg80
[    7.904645] cfg80
[    7.904646] cfg80
[    7.904647] cfg80
[  185.132730] ieee8
[  185.597695] ieee8
[  185.610444] ieee8
[  185.670976] ieee8
[  185.679755] ieee8
ubuntu@ubuntu:~$ 
```

Software & Updates — Ubuntu Software

Downloadable from the Internet

- ☑ Canonical-supported free and open-source software (main)
- ☑ Community-maintained free and open-source software (universe)
- ☑ Proprietary drivers for devices (restricted)
- ☑ Software restricted by copyright or legal issues (multiverse)
- □ Source code

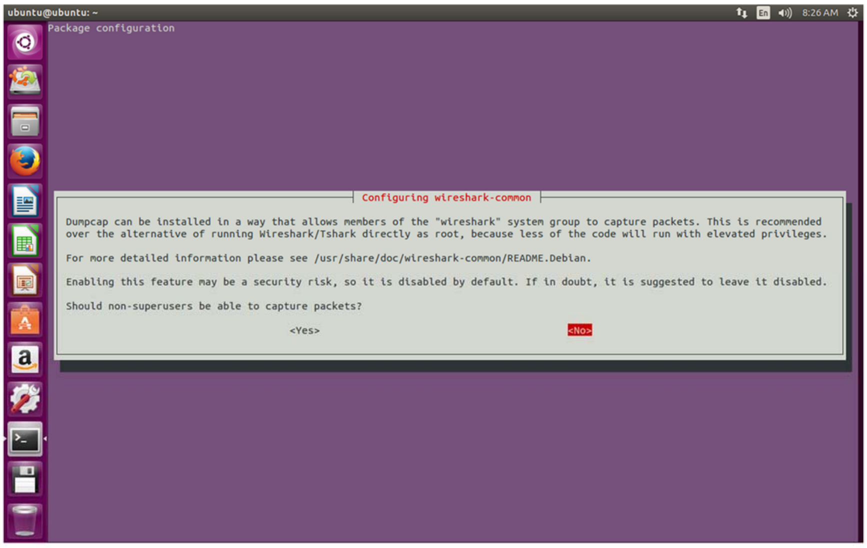
Download from: http://mirror01.idc.hinet.net/ubuntu

Installable from CD-ROM/DVD

☑ Cdrom with Ubuntu 15.04 'Vivid Vervet'
Officially supported
Restricted copyright

If you find error in previous step, open System Settings, select “Software & Updates”, check “universe” and “multiverse”, then Close and reload.

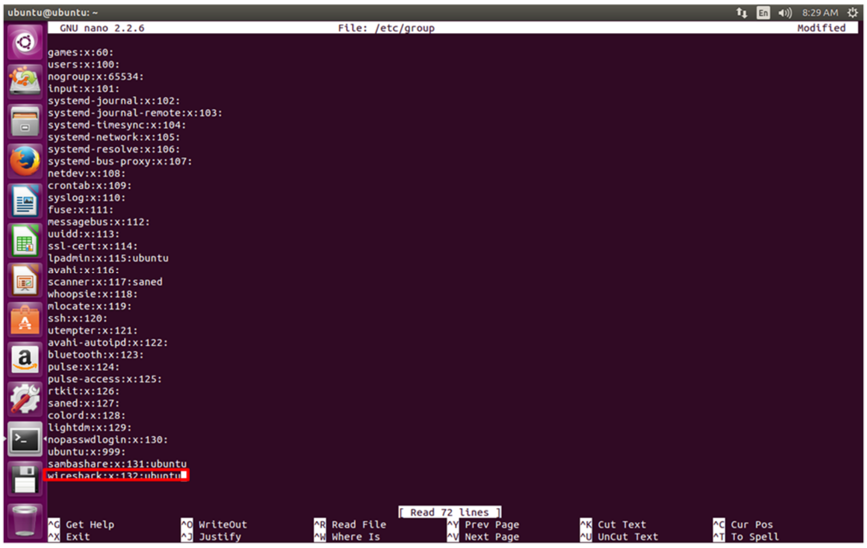
Step 7b. Set Permission



```
Package configuration

Configuring wireshark-common

Dumpcap can be installed in a way that allows members of the "wireshark" system group to capture packets. This is recommended
over the alternative of running Wireshark/Tshark directly as root, because less of the code will run with elevated privileges.

For more detailed information please see /usr/share/doc/wireshark-common/README.Debian.

Enabling this feature may be a security risk, so it is disabled by default. If in doubt, it is suggested to leave it disabled.

Should non-superusers be able to capture packets?

                    <Yes>                                                   <No>
```

Select “Yes” here to let non-root user run Wireshark and able to capture packets

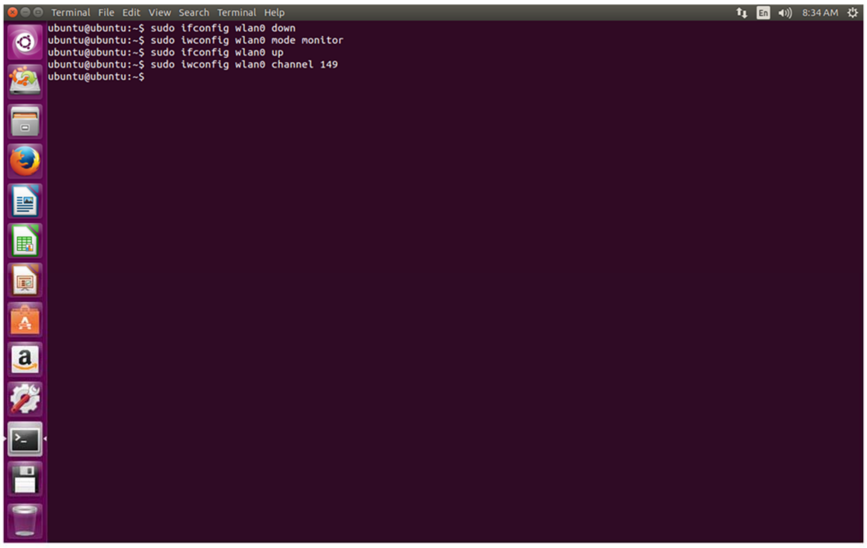
Step 7c. Edit User Group



```
  GNU nano 2.2.6                     File: /etc/group                              Modified

games:x:60:
users:x:100:
nogroup:x:65534:
input:x:101:
systemd-journal:x:102:
systemd-journal-remote:x:103:
systemd-timesync:x:104:
systemd-network:x:105:
systemd-resolve:x:106:
systemd-bus-proxy:x:107:
netdev:x:108:
crontab:x:109:
syslog:x:110:
fuse:x:111:
messagebus:x:112:
uuidd:x:113:
ssl-cert:x:114:
lpadmin:x:115:ubuntu
avahi:x:116:
scanner:x:117:saned
whoopsie:x:118:
mlocate:x:119:
ssh:x:120:
utempter:x:121:
avahi-autoipd:x:122:
bluetooth:x:123:
pulse:x:124:
pulse-access:x:125:
rtkit:x:126:
saned:x:127:
colord:x:128:
lightdm:x:129:
nopasswdlogin:x:130:
ubuntu:x:999:
sambashare:x:131:ubuntu
wireshark:x:132:ubuntu

                                         [ Read 72 lines ]
^G Get Help     ^O WriteOut     ^R Read File    ^Y Prev Page    ^K Cut Text     ^C Cur Pos
^X Exit         ^J Justify      ^W Where Is     ^V Next Page    ^U UnCut Text   ^T To Spell
```

Edit “/etc/group” and add user “ubuntu” into group “wireshark”
You need to logout and re-login after doing this

Step 8a. Set Up the WLAN Device

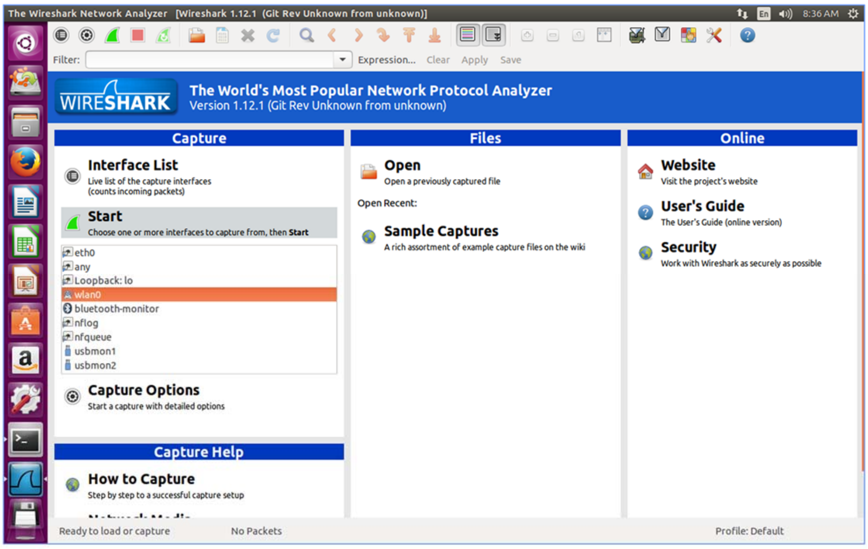


```
ubuntu@ubuntu:~$ sudo ifconfig wlan0 down
ubuntu@ubuntu:~$ sudo iwconfig wlan0 mode monitor
ubuntu@ubuntu:~$ sudo ifconfig wlan0 up
ubuntu@ubuntu:~$ sudo iwconfig wlan0 channel 149
ubuntu@ubuntu:~$
```

Use the following command to set your WLAN card into monitor mode:

$ sudo ifconfig wlan0 down
$ sudo iwconfig wlan0 mode monitor
$ sudo ifconfig wlan0 up
$ sudo iwconfig wlan0 channel 11 (change 11 to the channel you want to use for capture)

Step 8b. Open Wireshark & Start



The Wireshark Network Analyzer [Wireshark 1.12.1 (Git Rev Unknown from unknown)]

The World's Most Popular Network Protocol Analyzer
Version 1.12.1 (Git Rev Unknown from unknown)

Capture

Interface List
Live list of the capture interfaces (counts incoming packets)

Start
Choose one or more interfaces to capture from, then **Start**

- eth0
- any
- Loopback: lo
- wlan0
- bluetooth-monitor
- nflog
- nfqueue
- usbmon1
- usbmon2

Capture Options
Start a capture with detailed options

Capture Help

How to Capture
Step by step to a successful capture setup

Files

Open
Open a previously captured file

Open Recent:

Sample Captures
A rich assortment of example capture files on the wiki

Online

Website
Visit the project's website

User's Guide
The User's Guide (online version)

Security
Work with Wireshark as securely as possible

Ready to load or capture   No Packets   Profile: Default