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# Chapter 1: How to give a static IP address for Ethernet connection?

First way

Link: <https://www.electronicshub.org/setup-static-ip-address-raspberry-pi/>

1. Connect the Raspberry to a screen with a HDMI cable.
2. Open the Terminal of the Raspberry.
3. Type this command: ***ifconfig***

You will find all adapters for Internet connection.

1. Type this command: ***route –n***

You will find an IP routing table for the kernel.

1. Type this command: ***cat /etc/resolv.conf***

You will find all the DNS servers.

1. Type this command: ***sudo nano /etc/dhcpcd.conf***

Insert the following lines after the line “nohook lookup-hostname”:

* interface eth0
* static ip\_address=192.168.0.10/24
* static routers=192.168.0.1
* static domain\_name\_servers=192.168.0.1

Save the changes and close the file.

1. Type this command: ***sudo reboot***

Second way (Recommended)

Link: <https://raspberrypi.stackexchange.com/questions/37920/how-do-i-set-up-networking-wifi-static-ip-address>

1. Connect the Raspberry to a screen with a HDMI cable.
2. Open the Terminal of the Raspberry.
3. Type this command: ***sudo nano /etc/network/interfaces***

Add the following lines into the file:

***iface eth0 inet static***

***address 192.168.0.10***

***netmask 255.255.255.0***

***gateway 192.168.0.1***

1. Type this command: ***sudo reboot***

# Chapter 2: How to change the keyboard language?

Link: <https://raspberrypi.stackexchange.com/questions/10060/raspbian-keyboard-layout>

1. Open the shell.
2. Type this command: ***setxkbmap fr or setxkbmap en***.

It depends of the language.

# Chapter 3: How to display the screen of the Raspberry on a laptop?

Link: <https://maker.pro/raspberry-pi/tutorial/how-to-connect-a-raspberry-pi-to-a-laptop-display>

# Chapter 4: How to enable SSH server?

Link: <https://www.raspberrypi.org/documentation/remote-access/ssh/>

1. Open the shell.
2. Type this command: **sudo raspi-config**
3. Choose the SSH option.
4. Choose “Yes” to enable the SSH server.
5. Quit the wizard for the configuration.
6. Type this command: **sudo reboot**

# Chapter 5: How to setup WiFi on Raspberry Pi 2 using USB Dongle?

Link: <https://www.electronicshub.org/setup-wifi-raspberry-pi-2-using-usb-dongle/>

1. Open the shell.
2. Type this command: **dmesg | more**
3. Type this command: **sudo nano /etc/network/interfaces**

Insert the following lines:

**auto lo**

**iface lo inet loopback**

**iface eth0 inet manual**

**allow-hotplug wlan0**

**iface wlan0 inet manual**

**wpa-roam /etc/wpa\_supplicant/wpa\_supplicant.conf**

1. Type this command: ***sudo nano /etc/wpa\_supplicant/wpa\_supplicant.conf***

Insert the following lines after this line “update\_config=1”:

**network={**

**ssid=”Name of WiFi Network”**

**psk=”Password of the WiFi Network”**

**proto=RSN**

**key\_mgmt=WPA-PSK**

**pairwise=CCMP TKIP**

**group=CCMP TKIP**

**id\_str=”Name of WiFi Network”**

**}**

1. Type this command: ***sudo reboot***
2. Type this command: ***ifconfig***
3. Type this command: sudo ping [www.google.com](http://www.google.com)

You will see the statistics for the packets.

# Chapter 6: How to send SMS on Raspberry Pi using Dongle 3G?

Link: <https://raspbian-france.fr/envoyer-sms-raspberry-pi/>

First way

1. Check if your USB 3G dongle is supported by Gammu on this website: <https://wammu.eu/phones/>
2. Type this command : ***wget -O raspisms.deb*** [***http://raspisms.raspbian-france.fr/download/raspisms-2.0.deb***](http://raspisms.raspbian-france.fr/download/raspisms-2.0.deb)
3. Type this command: ***sudo aptitude update***
4. Type this command: ***sudo aptitude upgrade***
5. Type this command: ***sudo dpkg -i raspisms.ded***
6. Type this command: ***sudo aptitude install raspisms***

Second way

1. Check if your USB 3G dongle is supported by Gammu on this website : <https://wammu.eu/phones/>
2. Type this command : ***sudo aptitude update***
3. Type this command: ***sudo aptitude upgrade***
4. Type this command: ***sudo aptitude install apache2 php php-mysql php-mbstring gammu gammu-smsd mysql-server***
5. Type this command: ***sudo a2enmod rewrite***
6. Type this command: ***sudo /etc/init.d/apache2 restart***
7. Type this command: ***sudo nano /var/www/html/.htaccess***

Write this line into the file: **deny from all**

1. Type this command: ***sudo nano /etc/apache2/apache2.conf***

Replace all the lines : ***AllowOverride None*** by ***AllowOverride All.***

1. Type this command: ***sudo /etc/init.d/apache2 restart***
2. Type this command: ***sudo reboot***
3. Type this command: ***sudo rm /var/www/html/.htaccess***
4. Type this command: dmesg

Memorize the port seeming like /dev/ttyUSB0.

1. Type this command: ***sudo nano /etc/gammu-smsdrc***

Enter the port into the file.

***[gammu]***

***# Please configure this!***

***port = the port***

***connection = at19200***

***#pin = XXXX***

***# Debugging***

***# logformat = textall***

Enter the pin if you like.

# Chapter 7: How to install mysql-server?

Link: <https://thepi.io/how-to-set-up-a-web-server-on-the-raspberry-pi/>

1. Type this command: ***sudo aptitude install mysql-server***
2. Type this command: ***sudo mysql\_secure\_installation***