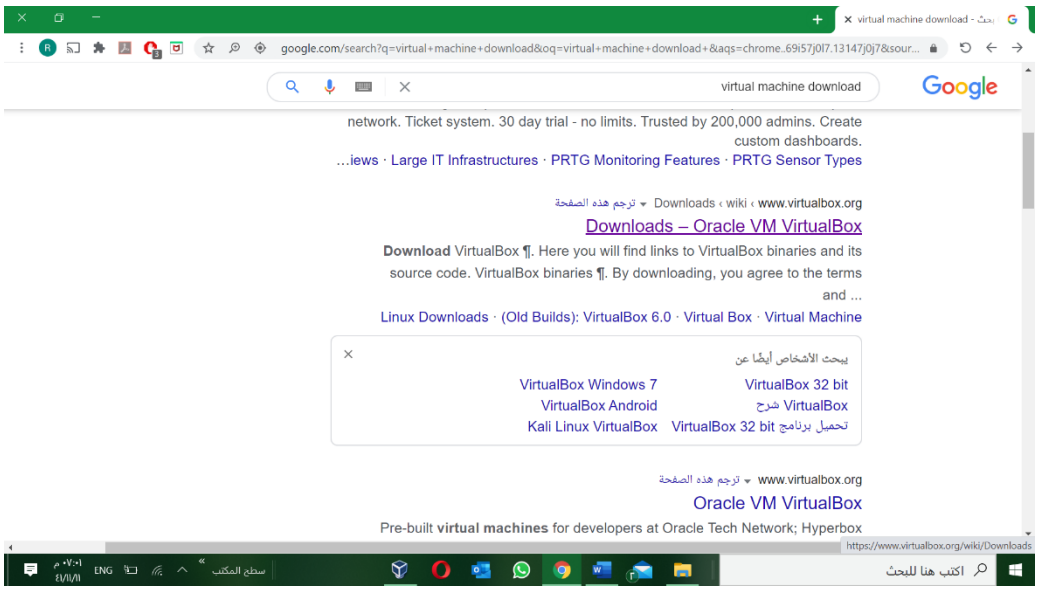
Download ROS - ROS تحميل

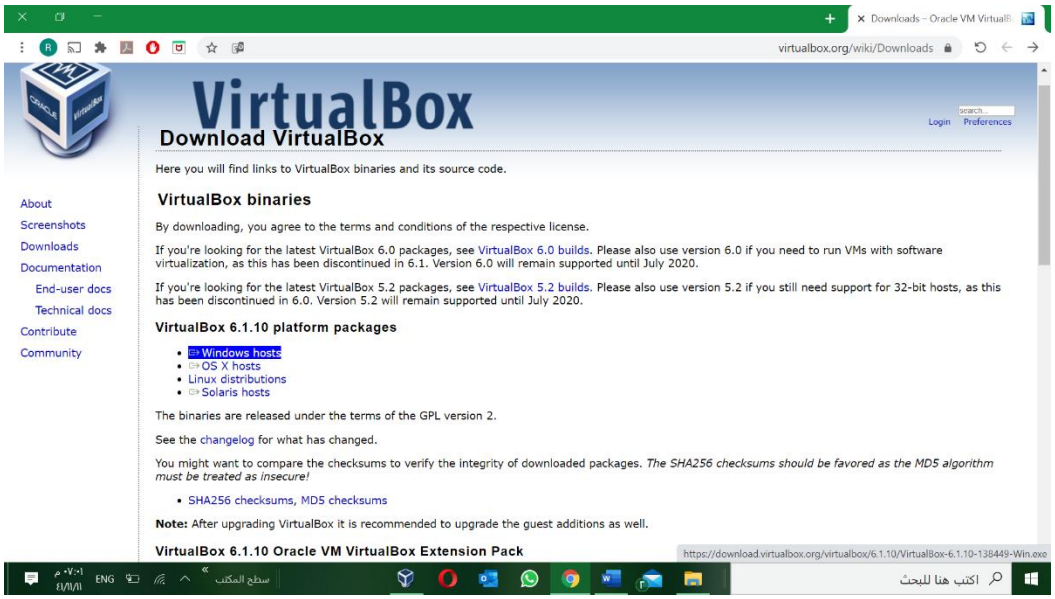
- في البداية لتحميل ROS يجب ان تحمل أولا VirtualBox بواسطة الرابط التالي : https://www.virtualbox.org/wiki/Downloads

- to download Ros, you must download the virtual machine from VirtualBox website via the previous Link.

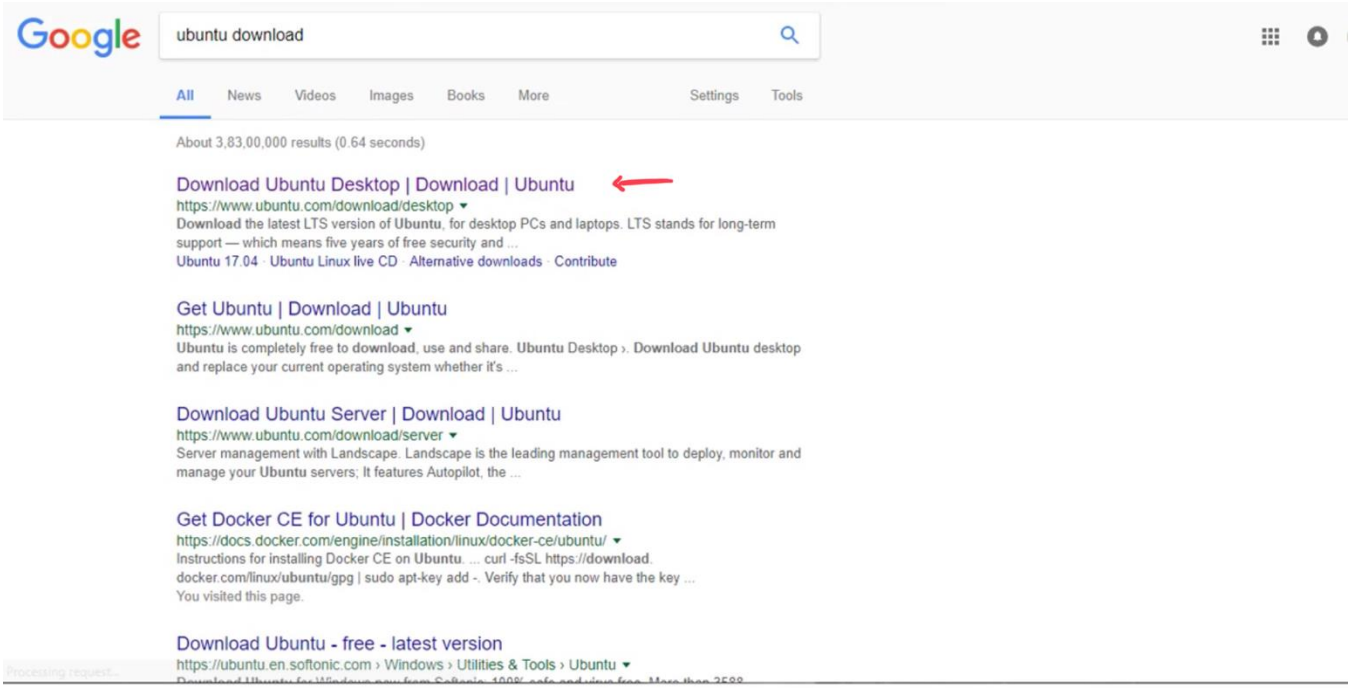


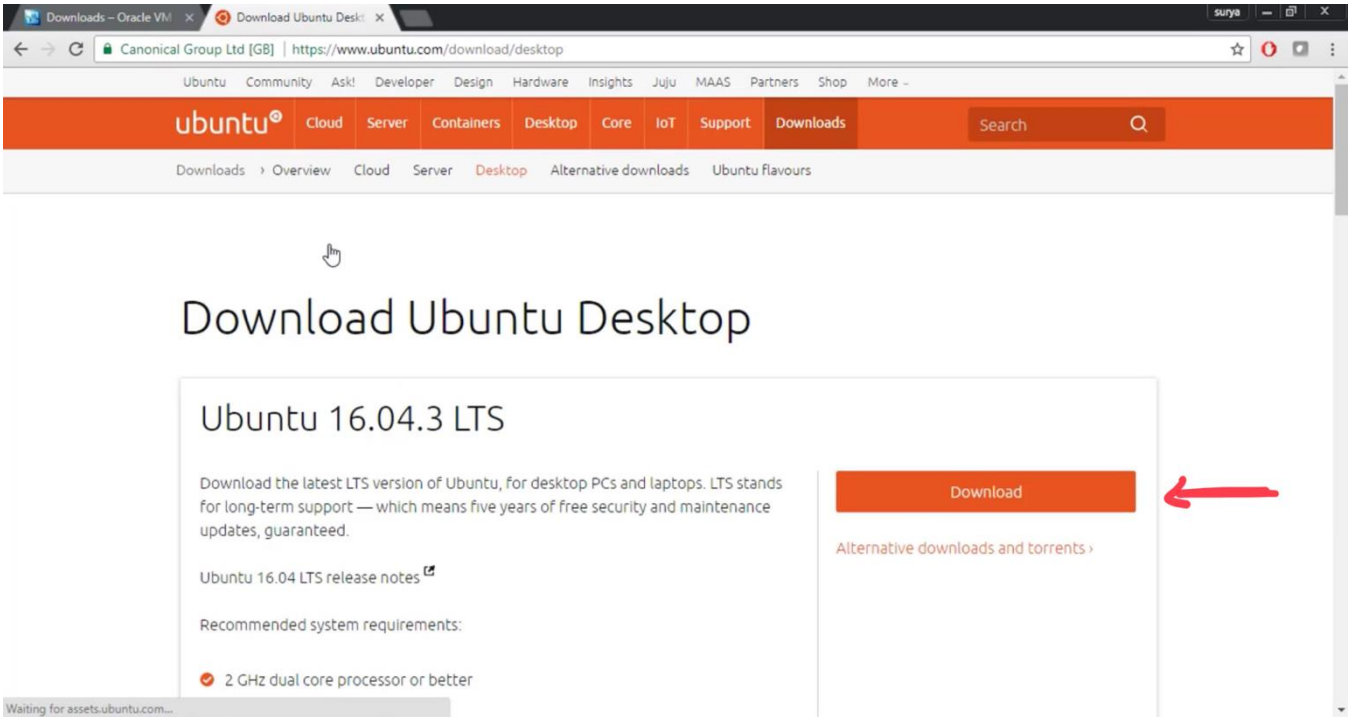
- ثم حمل النسخة المناسبة لنوع جهازك وبما ان نوع جهازي هو windows فلذلك سأختار Windows hosts وسوف يتحمل مباشرة في الجهاز.

- then you must download the platform that suits your OS, since my OS is windows so I will click on Windows hosts.



- افتح المتصفح وحمل ال Ubuntu desktop على جهازك باستخدام الرابط التالي:
- Open the browser and download Ubuntu desktop using the next link:
  https://ubuntu.com/download/desktop



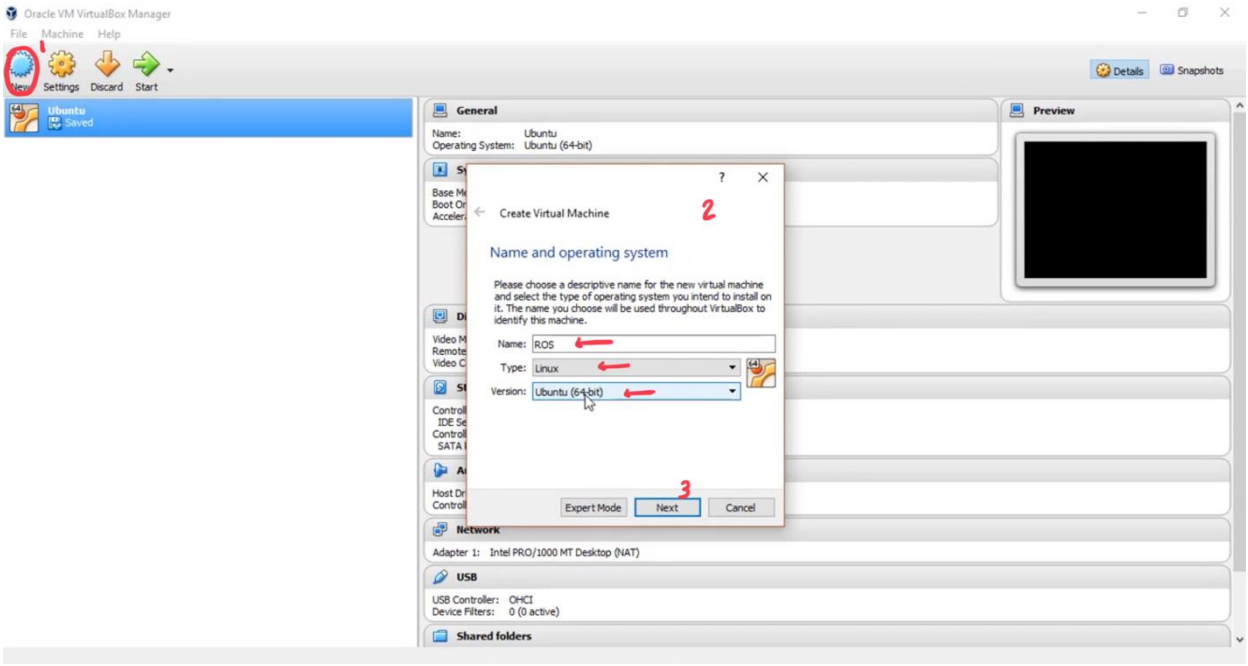


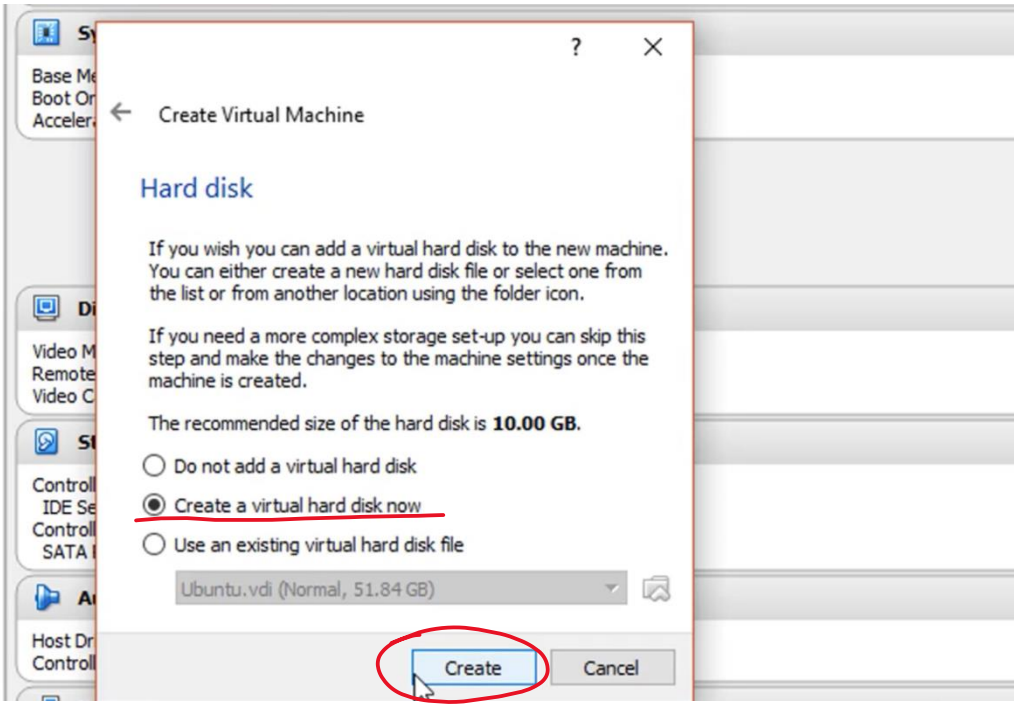
- بعد تحميل ال virtualBox و ملف ubuntu يجب فتح برنامج ال virtualBox manager لإنشاء virtual machine ثم اتبع الخطوات التالية:

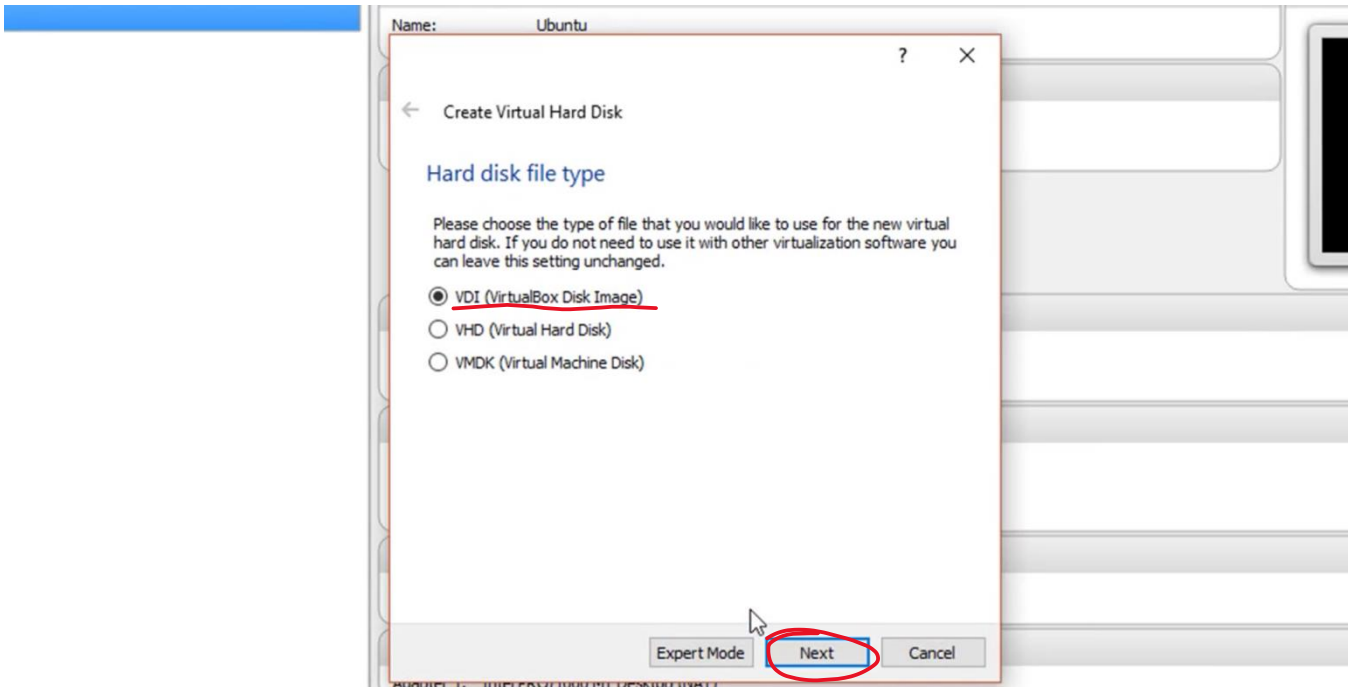
- After downloading the virtualBox and the ubuntu file you must open the virtualBox manger to create new virtual machine, then follow the next steps:

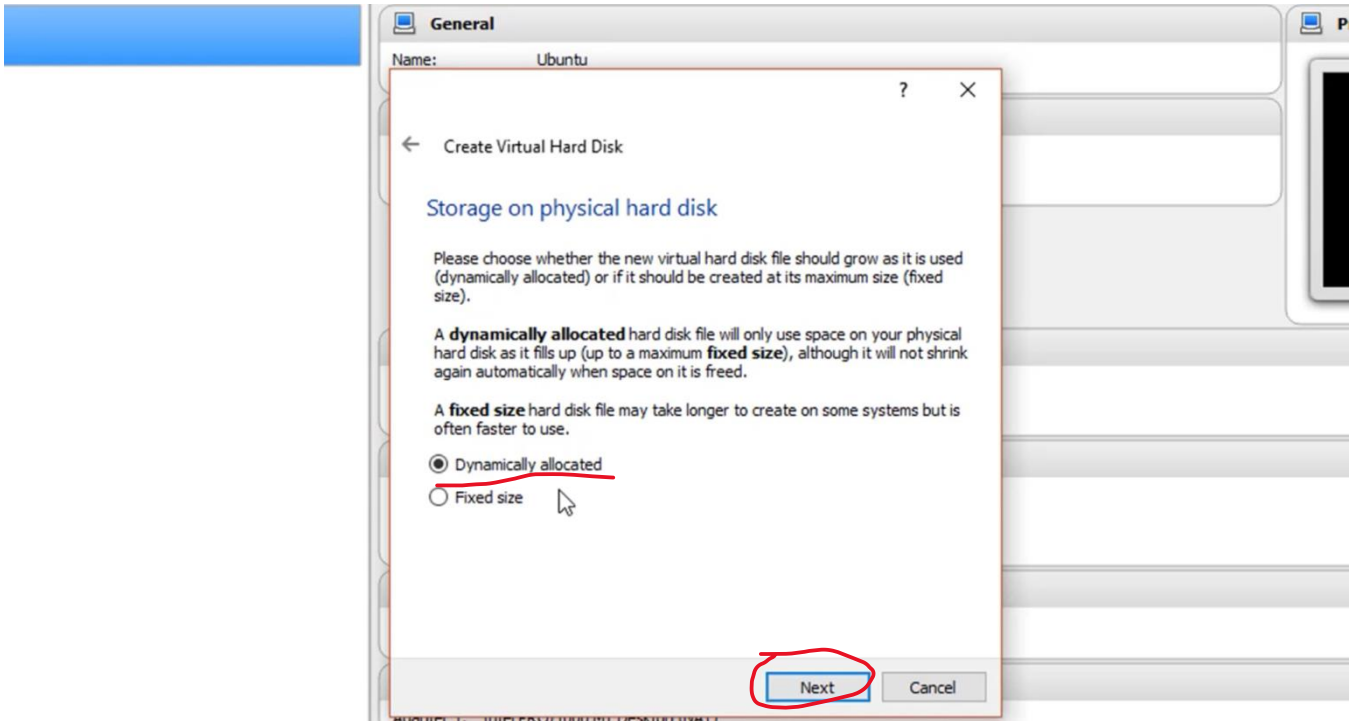
- املأ الحقول التالية باختيار نوع Linux ونسخة ubuntu المناسبة لنوع جهازك.

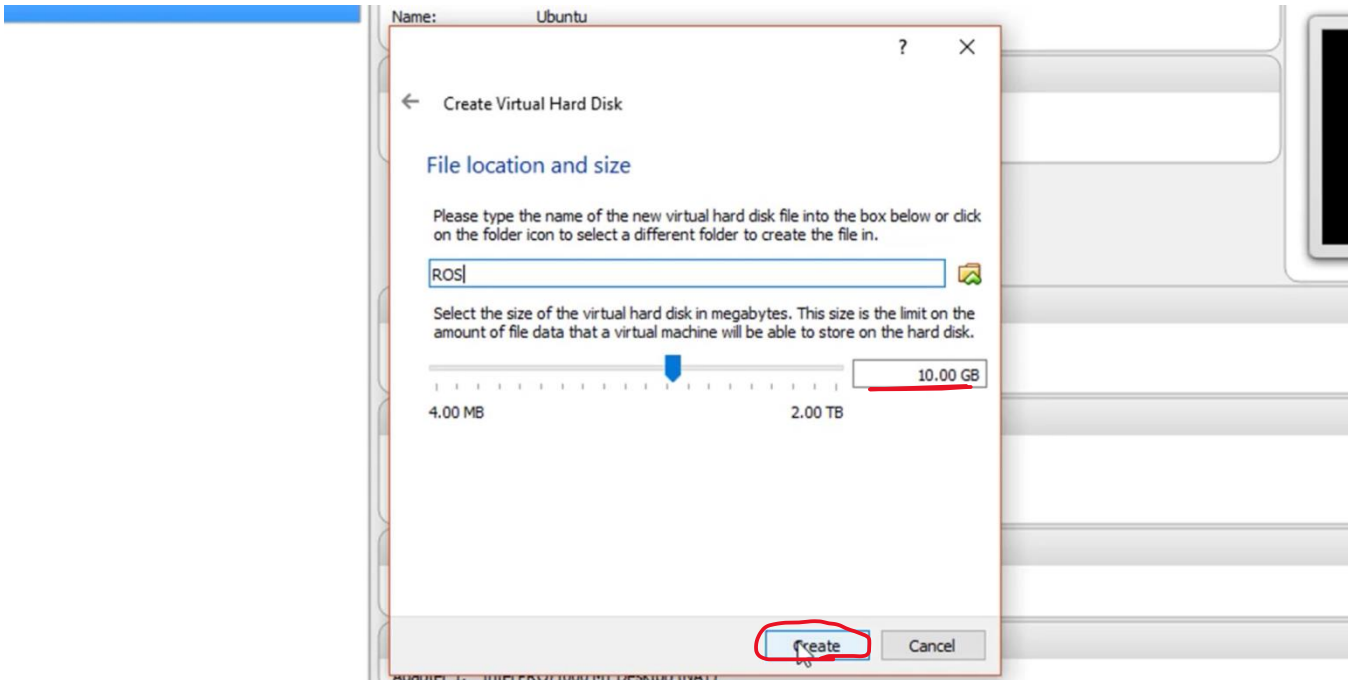
- Fill the fields and choose for the type Linux and And the appropriate Ubuntu version for your device.



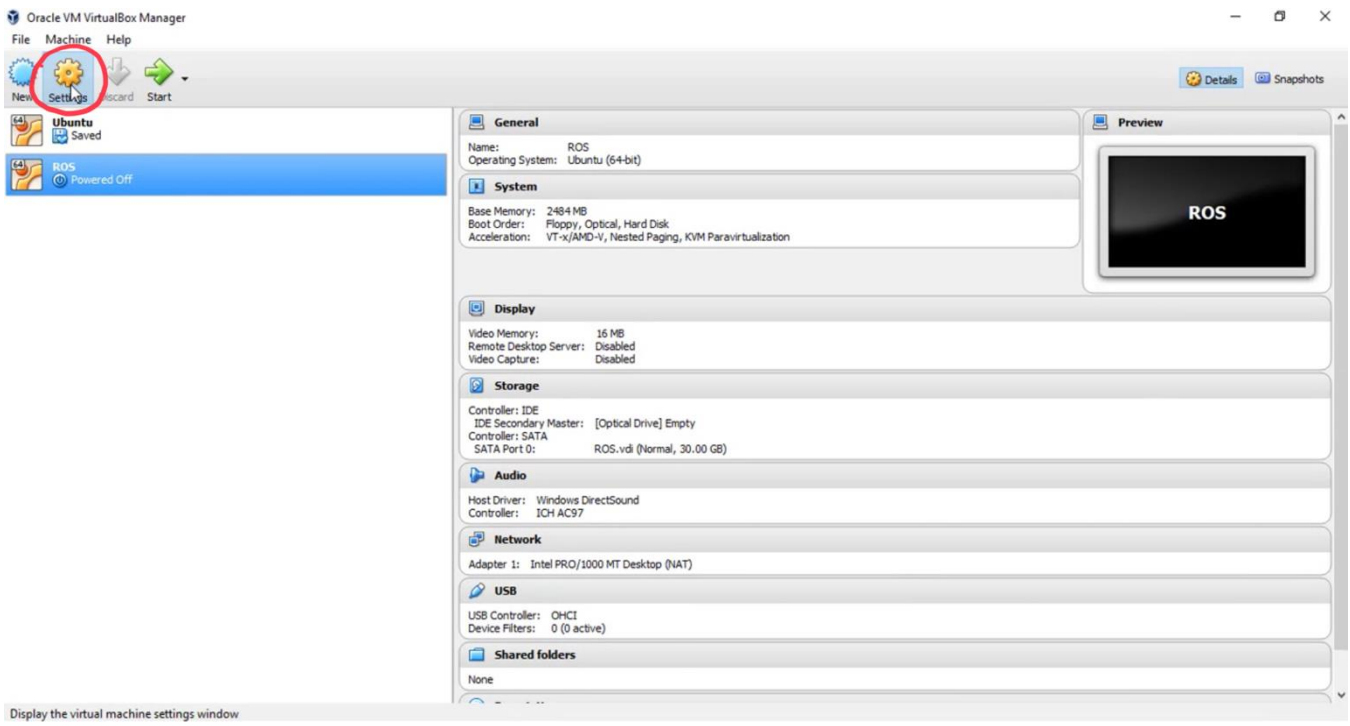



Name: Ubuntu
Create Virtual Hard Disk
Hard disk file type
Please choose the type of file that you would like to use for the new virtual hard disk. If you do not need to use it with other virtualization software you can leave this setting unchanged.
VDI (VirtualBox Disk Image)
VHD (Virtual Hard Disk)
VMDK (Virtual Machine Disk)
Expert Mode
Next
Cancel

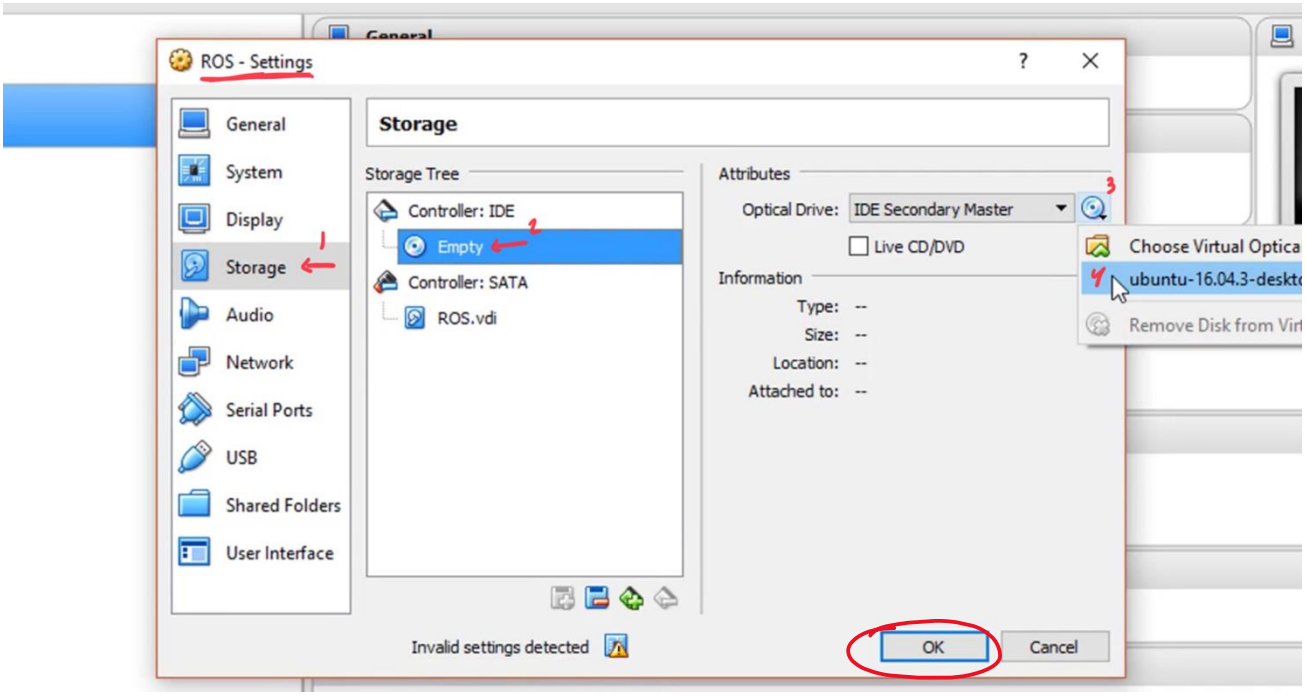

General
Name: Ubuntu
Create Virtual Hard Disk
Storage on physical hard disk
Please choose whether the new virtual hard disk file should grow as it is used (dynamically allocated) or if it should be created at its maximum size (fixed size).
A dynamically allocated hard disk file will only use space on your physical hard disk as it fills up (up to a maximum fixed size), although it will not shrink again automatically when space on it is freed.
A fixed size hard disk file may take longer to create on some systems but is often faster to use.
Dynamically allocated
Fixed size
Next
Cancel



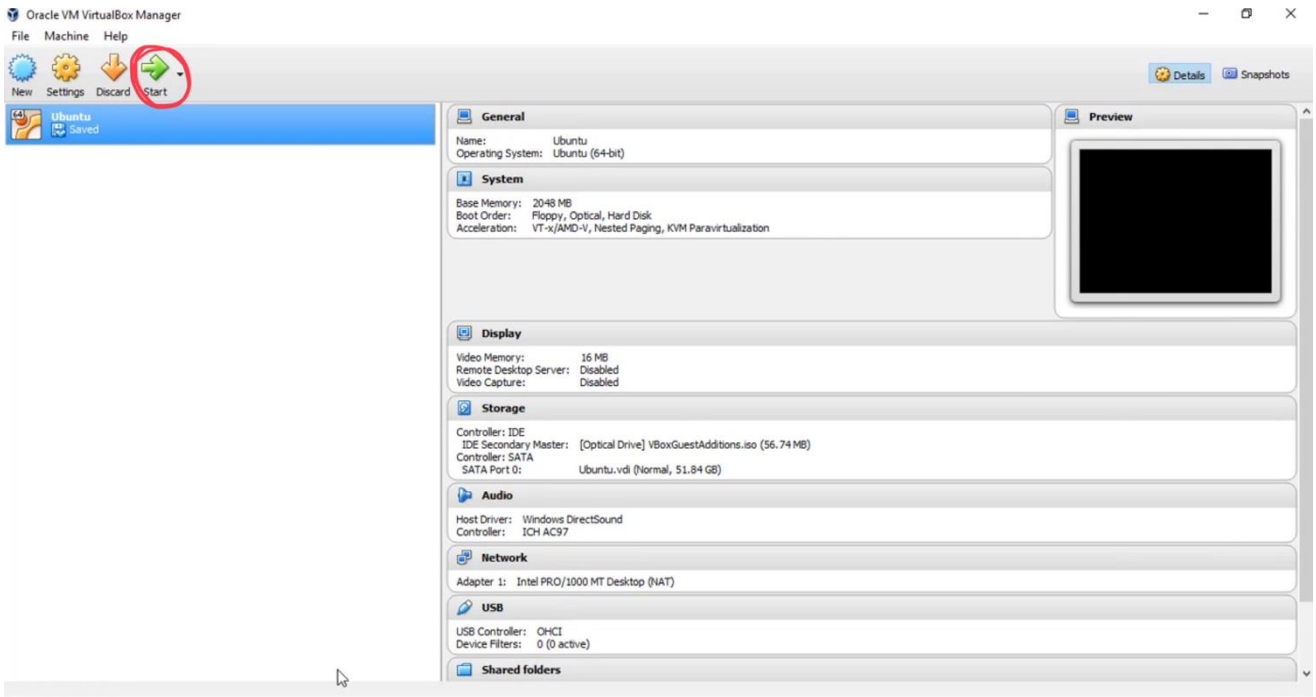
- بعد ذلك اضغط على الاعدادات (Settings) ثم على التخزين (Storage).
- After that click on the settings the click on the storage.



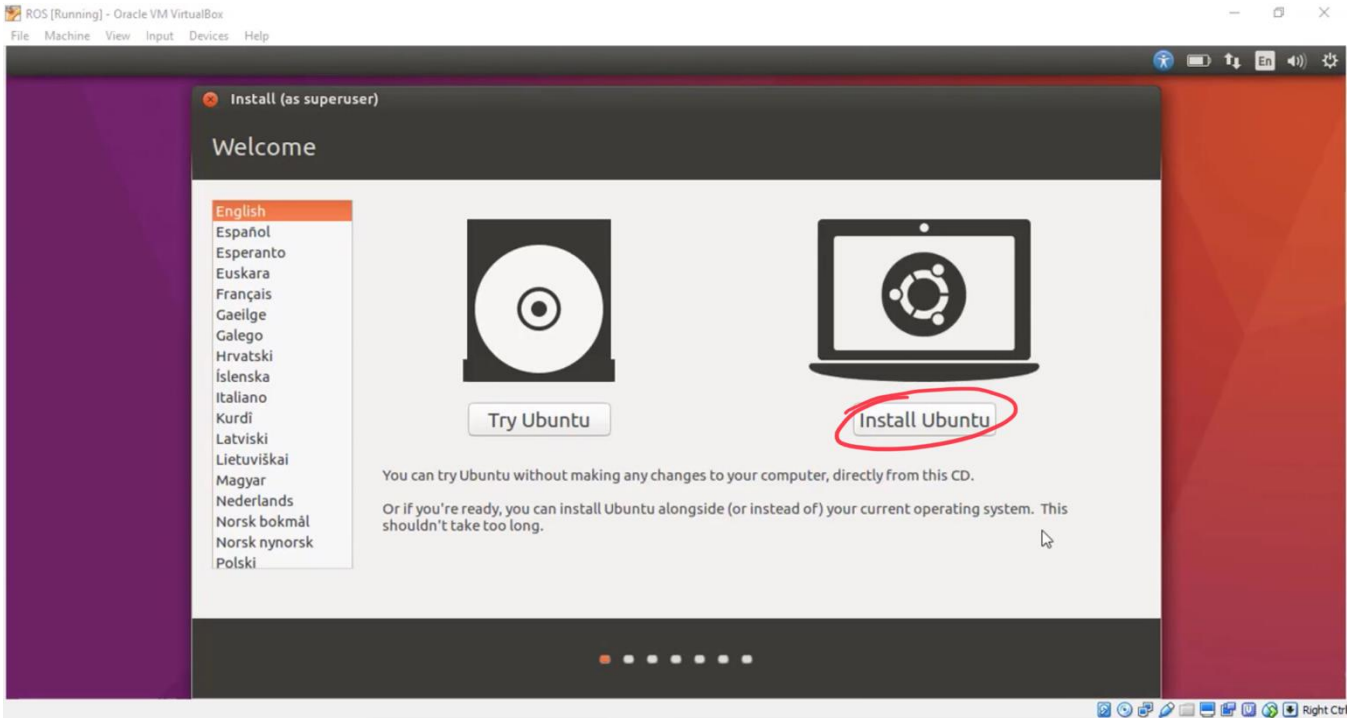
- بعد ذلك اختر ملف ال ubuntu الذي حملته لتستطيع تشغيل ال virtual machine .
- Then you have to choose the Ubuntu iso file so you can play the Ubuntu virtual machine.

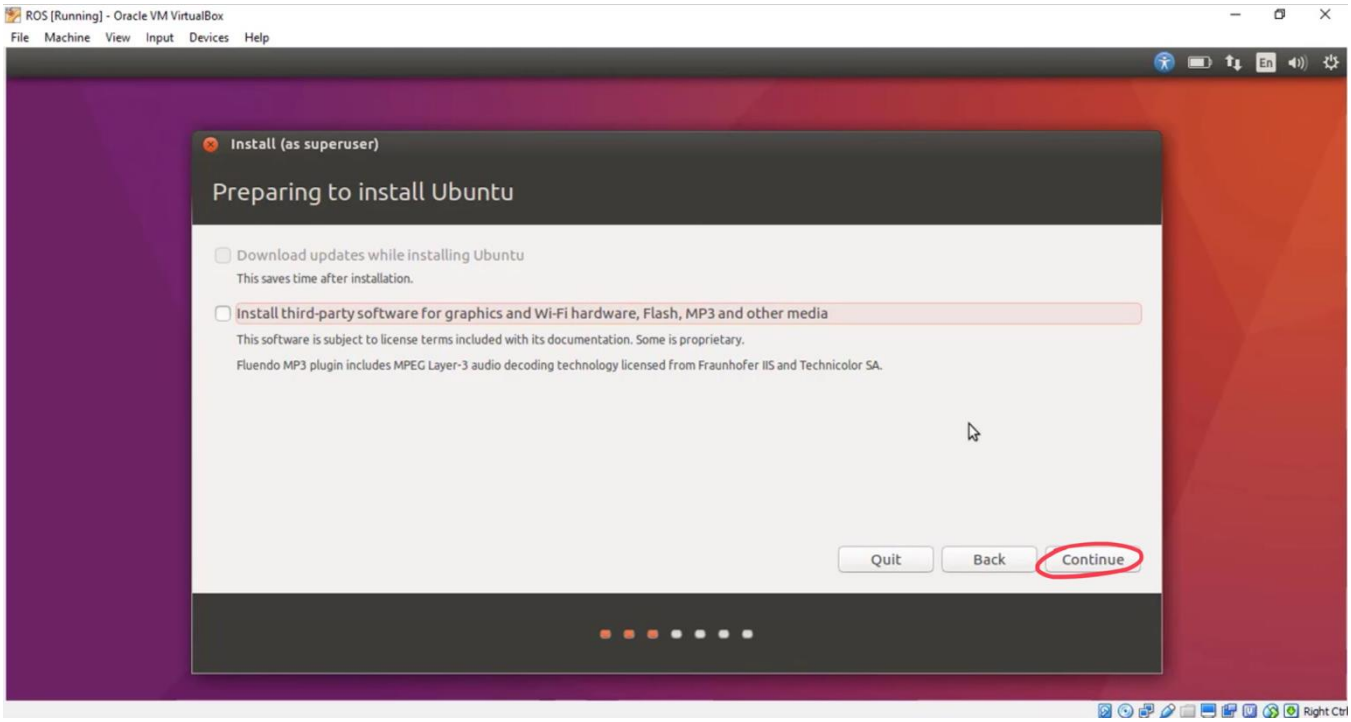


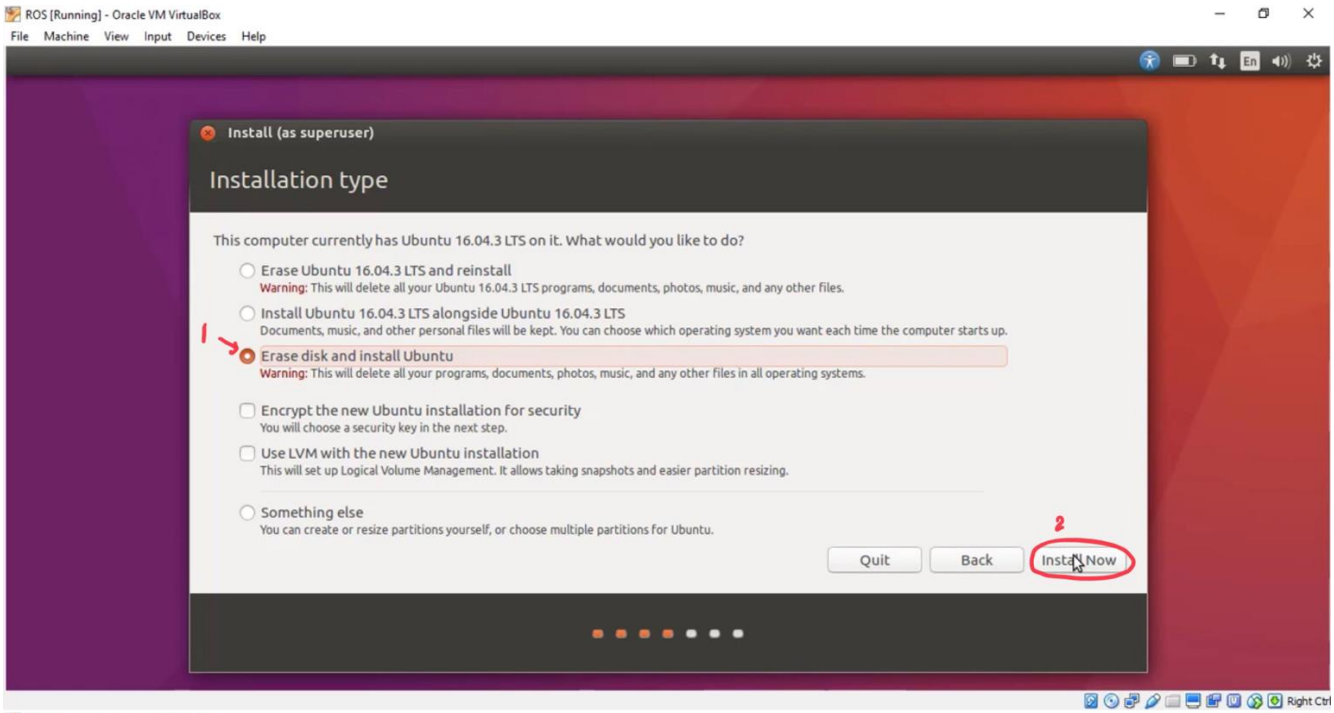
- الان يجب عليك تشغيل ال virtual machine التي قمت بانشاءها عن طريق الضغط على ابدأ (start).
- Now you can start the virtual machine you've created by clicking on start.

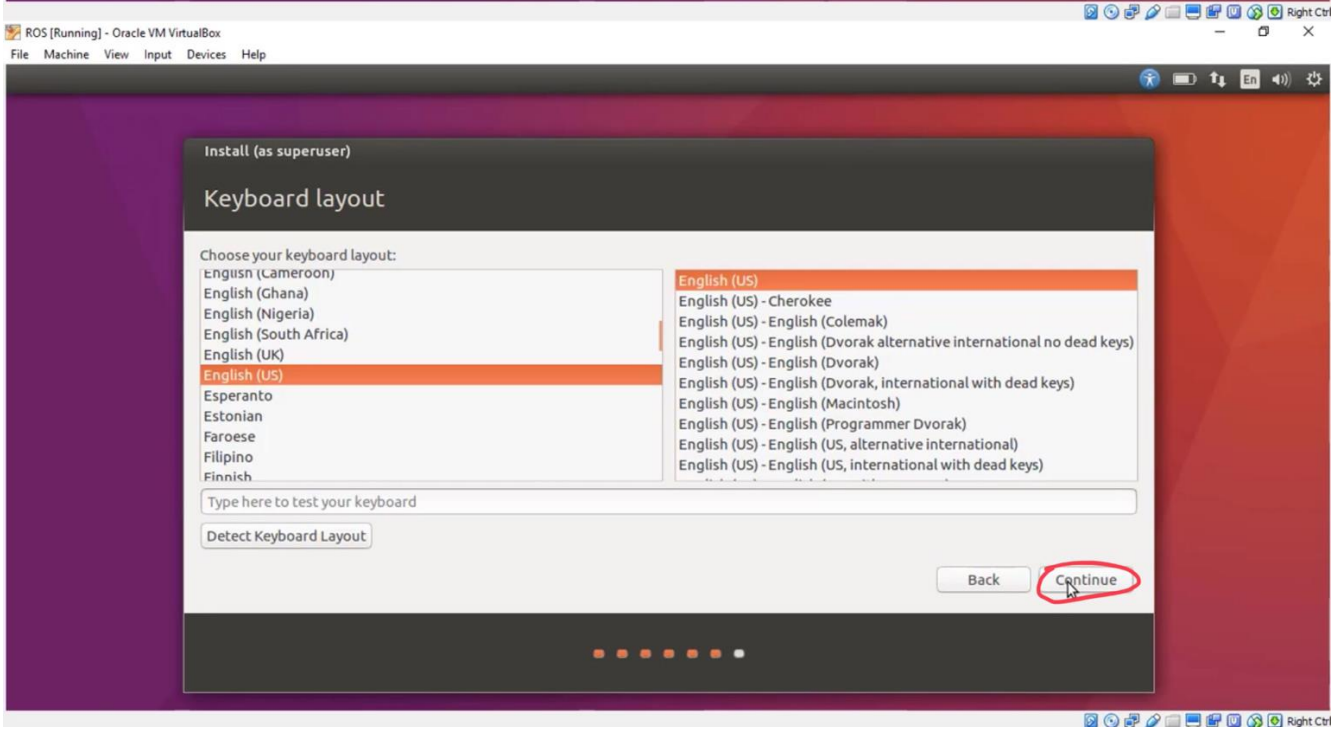


- بعدها سوف تظهر هذه الواجهة لتتمكن من تحميل Ubuntu يجب عليك اتباع الخطوات التالية:
- Then It will apear for you this interface. Follow the next steps so you can install the ubuntu.



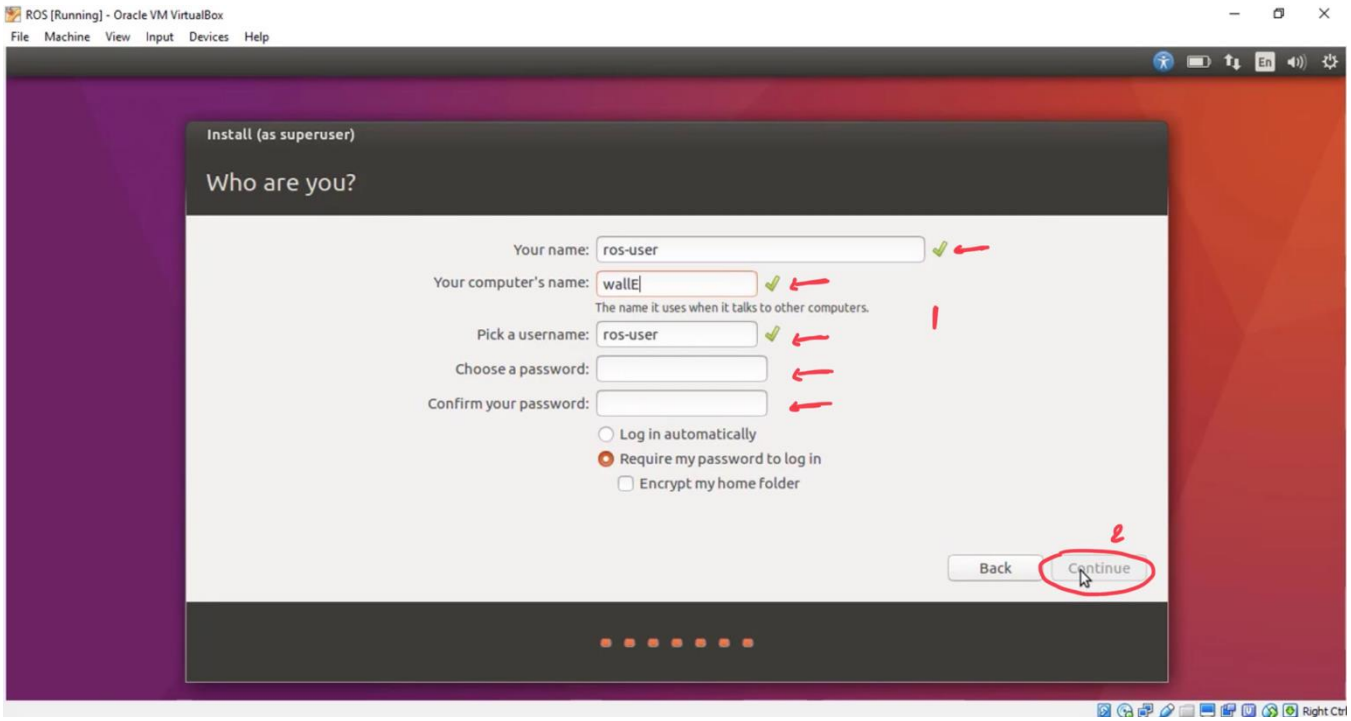



ROS [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Install (as superuser)
Installation type
This computer currently has Ubuntu 16.04.3 LTS on it. What would you like to do?
Erase Ubuntu 16.04.3 LTS and reinstall
Warning: This will delete all your Ubuntu 16.04.3 LTS programs, documents, photos, music, and any other files.
Install Ubuntu 16.04.3 LTS alongside Ubuntu 16.04.3 LTS
Documents, music, and other personal files will be kept. You can choose which operating system you want each time the computer starts up.
1
Erase disk and install Ubuntu
Warning: This will delete all your programs, documents, photos, music, and any other files in all operating systems.
Encrypt the new Ubuntu installation for security
You will choose a security key in the next step.
Use LVM with the new Ubuntu installation
This will set up Logical Volume Management. It allows taking snapshots and easier partition resizing.
Something else
You can create or resize partitions yourself, or choose multiple partitions for Ubuntu.
2
Quit
Back
Install Now
Right Ctrl


ROS [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Install (as superuser)
Keyboard layout
Choose your keyboard layout:
English (Cameroon)
English (Ghana)
English (Nigeria)
English (South Africa)
English (UK)
English (US)
Esperanto
Estonian
Faroese
Filipino
Finnish
English (US)
English (US) - Cherokee
English (US) - English (Colemak)
English (US) - English (Dvorak alternative international no dead keys)
English (US) - English (Dvorak)
English (US) - English (Dvorak, international with dead keys)
English (US) - English (Macintosh)
English (US) - English (Programmer Dvorak)
English (US) - English (US, alternative international)
English (US) - English (US, international with dead keys)
Type here to test your keyboard
Detect Keyboard Layout
Back
Continue
Right Ctrl

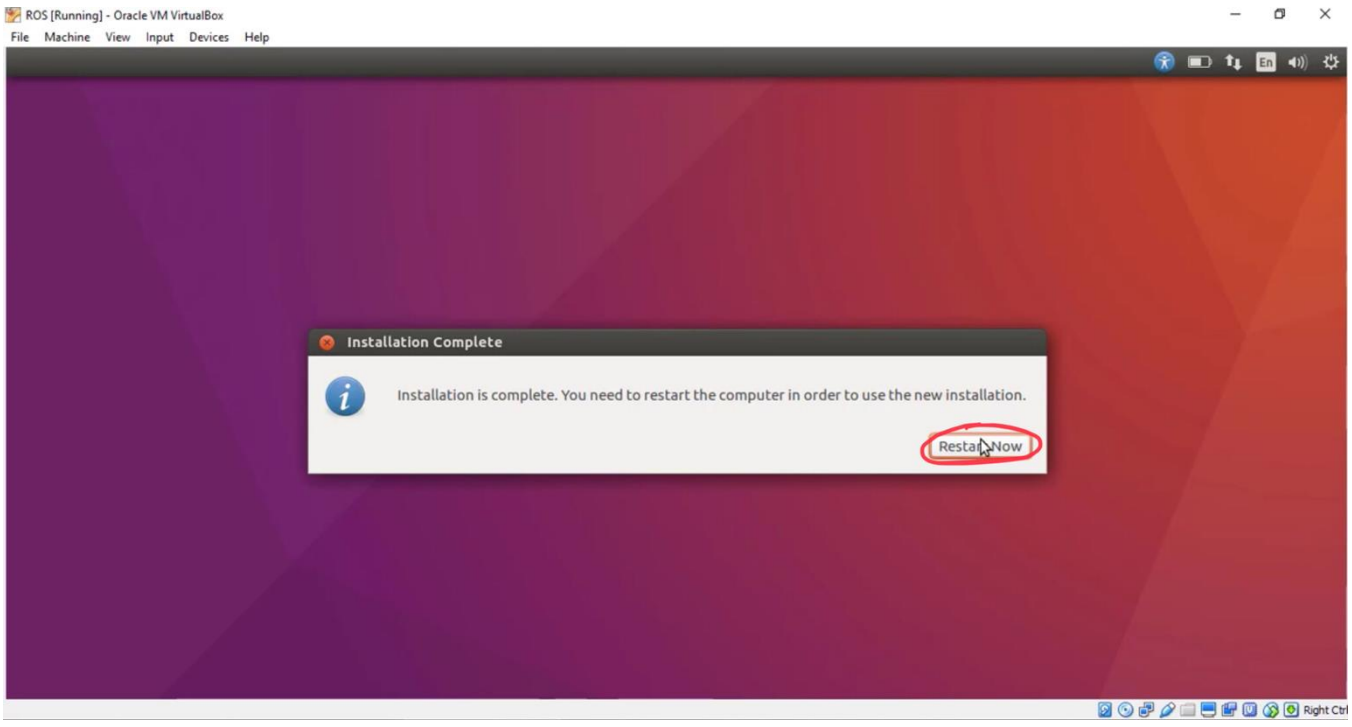
- املأ الحقول التالية بمعلوماتك واختر كلمة مرور مناسبة.

- Fill in the fields with your information and choose the appropriate password.



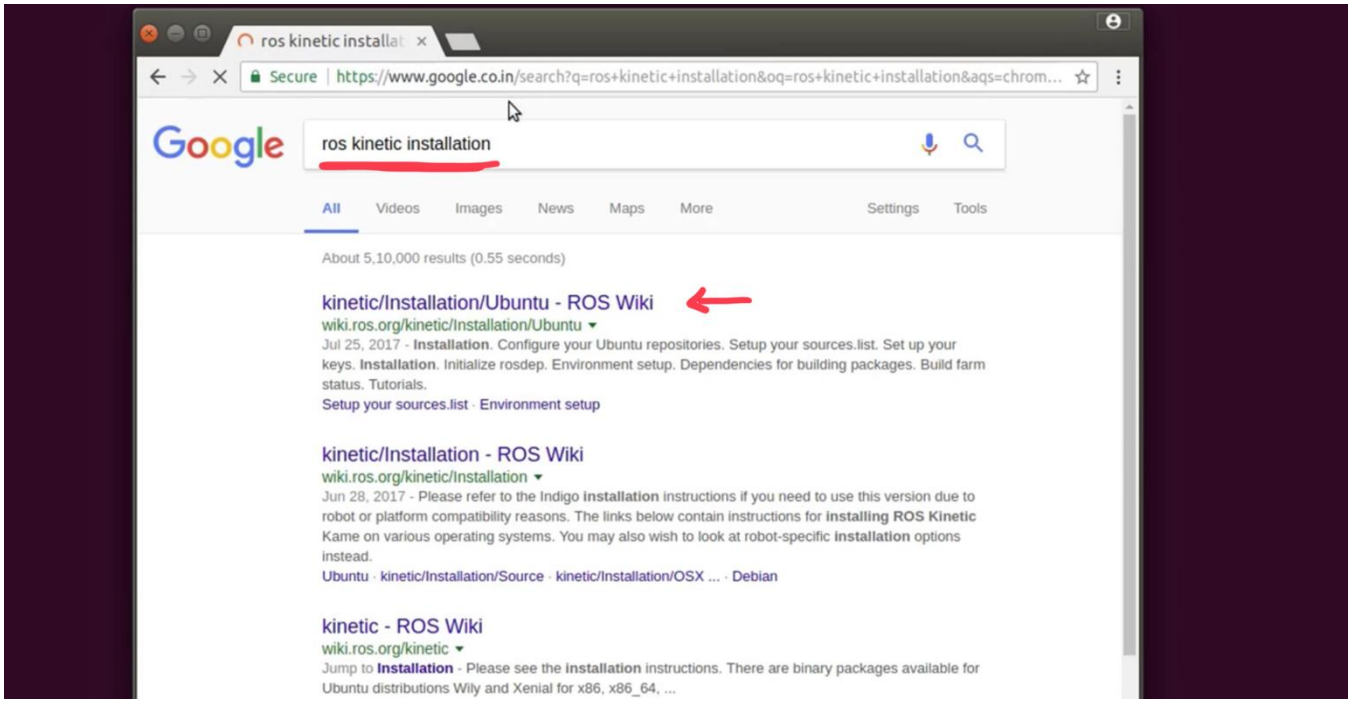
- بعد انتهاء التحميل اعد التشخيل لتستطيع استخدامه.

- After the installation is complete, restart to be able to use it.



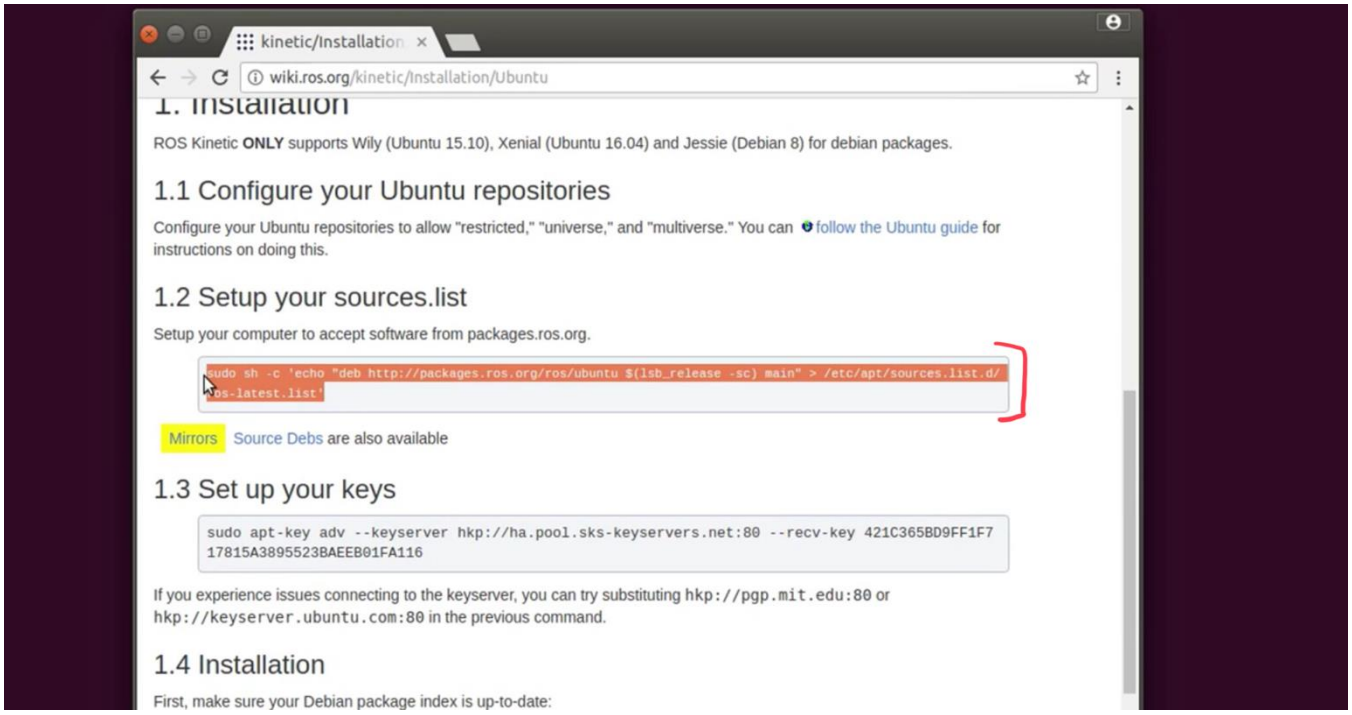
- والان افتح المتصفح لتتمكن من البحث وتحميل ROS Kinetic من موقع التحميل عبر الرابط التالي:

- now you have to open the browser so you can install ROS Kinetic, via this Link:
http://wiki.ros.org/kinetic/Installation/Ubuntu



- ثم بعد ذلك يجب عليك فتح ال Terminal لتستطيع كتابة ونسخ الأوامر من موقع تحميل ROS.

- Then, you must open the terminal to be able to copy and paste the commands from the installation website.

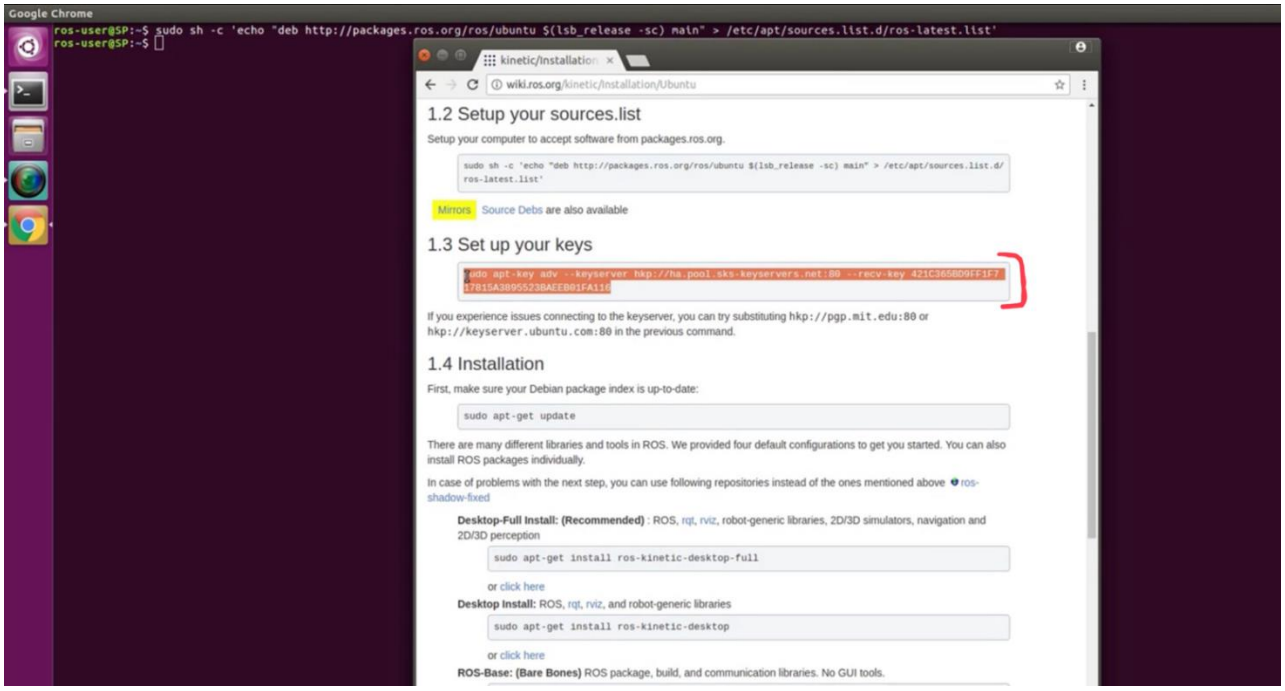


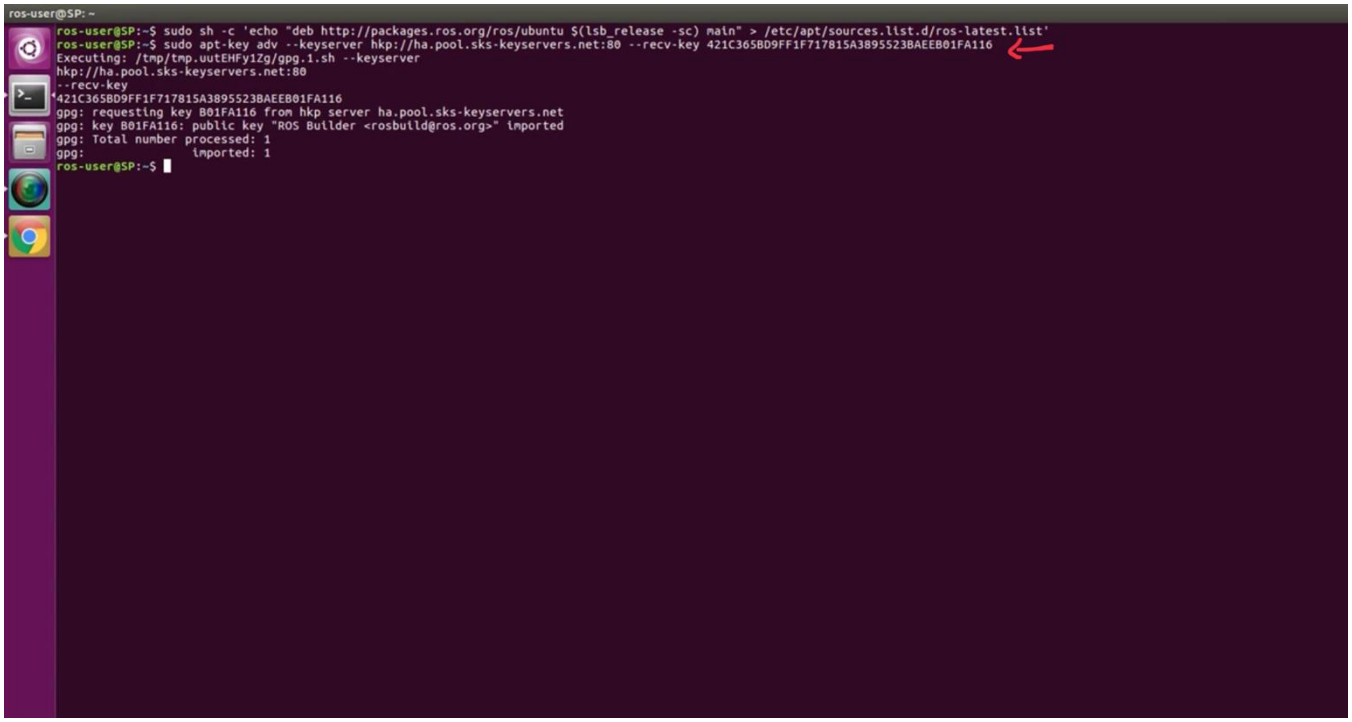
- قم بإعداد جهاز الكمبيوتر الخاص بك لقبول البرامج بواسطة نسخ الأوامر من الموقع ولصقها في الTirmenal

- Setup your computer to accept software from packages.ros.org. by copying the commands and paste them in the terminal.

First: Setup your sources.list

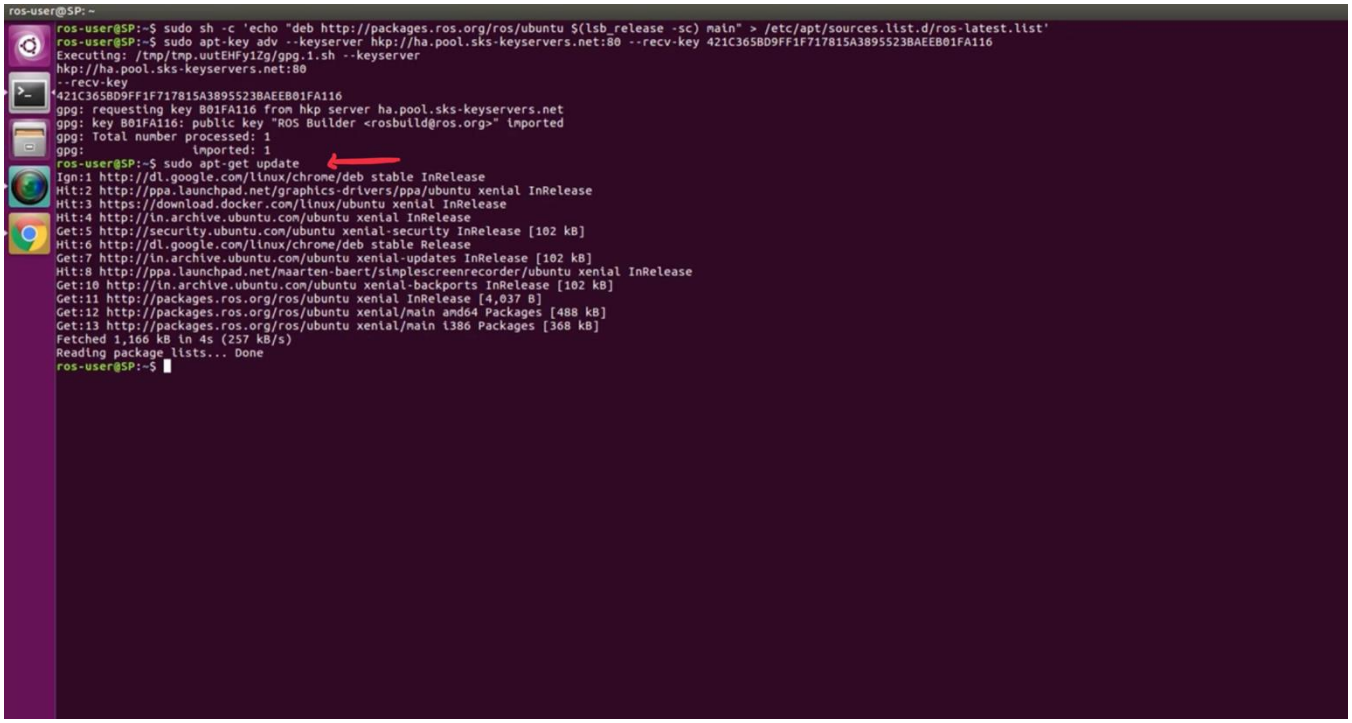
Seconed: set up the keys





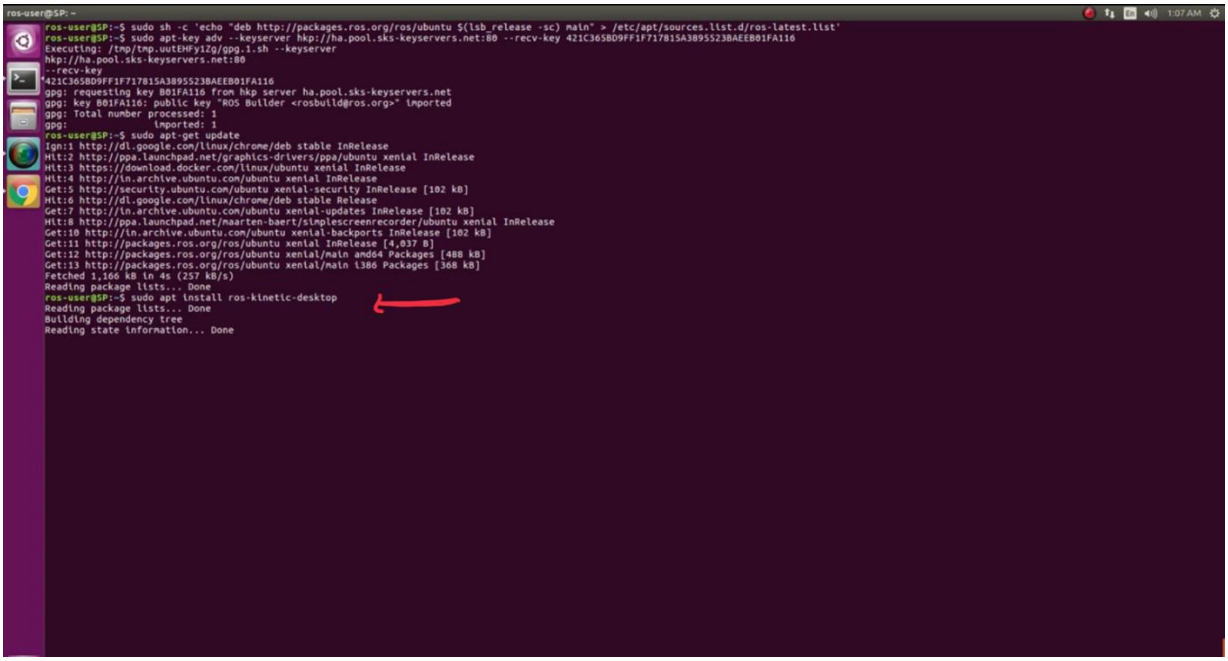
- بعد اعداد مصادر ومفاتيح الجهاز يجب عليك التحديث لتضمن عدم حدوث مشاكل وقت التحميل.

- after sitting up the sources and the keys, you have to update to guarantee that no errors will happen.



- بعد التحديث نستطيع الان تنزيل ROS kinetic Desktop عبر كتابة الامر الموضح في الصورة.

- after the update, we can install ROS kinetic Desktop by the command that appear in the picture.



- الان يجب عليك اعداد البيئة عبر نسخ السطرين الموضحين في الصورة والصاقهم في الterminal.

- now you have to set up the environment via copying these two lines and paste them in the terminal.

1.5 Environment setup

It's convenient if the ROS environment variables are automatically added to your bash session every time a new shell is launched:

```
echo "source /opt/ros/kinetic/setup.bash" >> ~/.bashrc
source ~/.bashrc
```

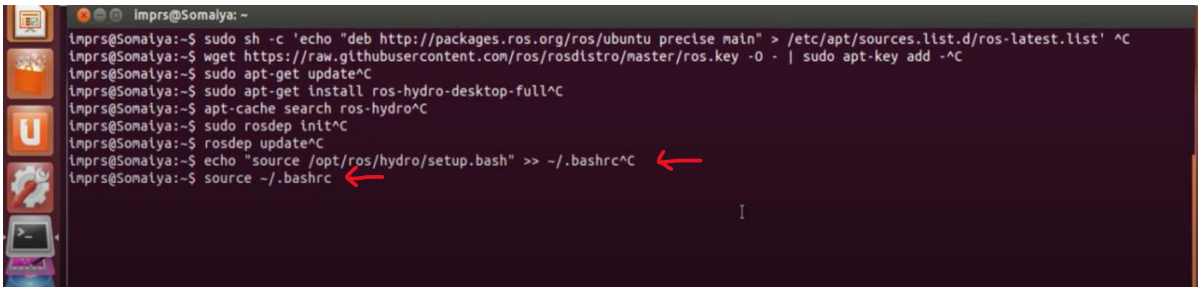
If you have more than one ROS distribution installed, `~/.bashrc` must only source the `setup.bash` for the version you are currently using.

If you just want to change the environment of your current shell, instead of the above you can type:

```
source /opt/ros/kinetic/setup.bash
```

If you use zsh instead of bash you need to run the following commands to set up your shell:

```
echo "source /opt/ros/kinetic/setup.zsh" >> ~/.zshrc
source ~/.zshrc
```



- قبل استخدام ROS قم بتهيئة rosedep عن طريق نسخ سطري الأوامر من الموقع والصاقهم في الterminal لتتمكن من تثبيت تبعيات نظام المصدر بسهولة.

- Before you can use many ROS tools, you will need to initialize rosdep by coping these commends and paste them in the terminal. Because it enables you to easily install system dependencies for source you want to compile and is required to run some core components in ROS.

1.6.1 Initialize rosdep

Before you can use many ROS tools, you will need to initialize `rosdep`. `rosdep` enables you to easily install system dependencies for source you want to compile and is required to run some core components in ROS. If you have not yet installed `rosdep`, do so as follows.

```
sudo apt install python-rosdep
```

With the following, you can initialize `rosdep`.

```
sudo rosdep init
rosdep update
```

1.7 Build farm status

The packages that you installed were built by the ROS build farm. You can check the status of individual packages here.

وبهذه الطريقة تكون قد انتهيت من تحميل ROS على الUbuntu

Using this way, you have completed installing ROS on Ubuntu

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