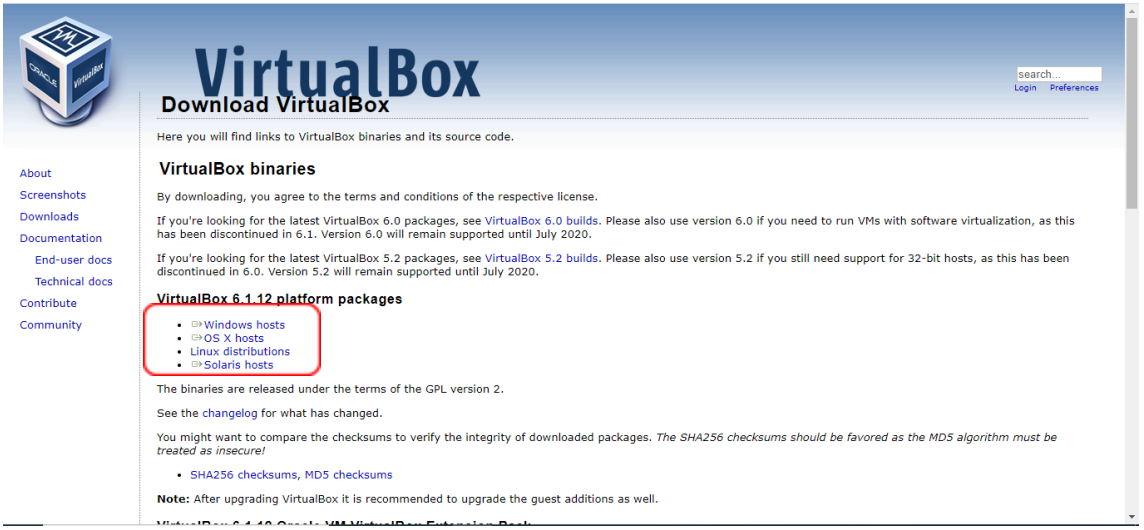
How to Install Liquid Galaxy on Virtual Machines

By Otávio Oliveira

To install the Liquid Galaxy system on Virtual Machines follow the steps below

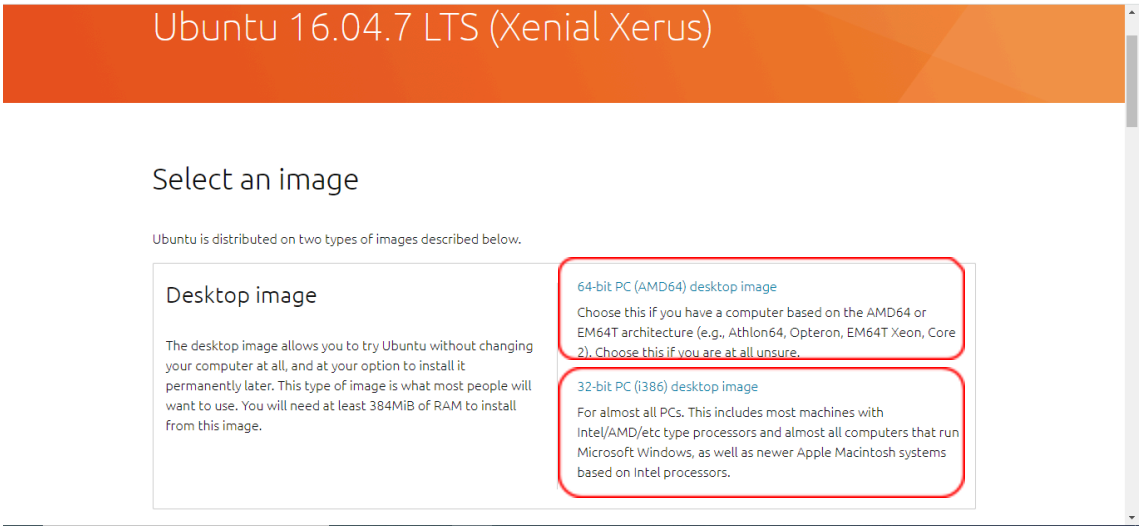
Download VirtualBox from the developer's website https://www.virtualbox.org/

Click Download and then select your operating system



Also download the extension package, with this package you can use USB devices and other types of external drivers.

After downloading both files, also download the ISO image of the Ubuntu 16.04 operating system https://releases.ubuntu.com/16.04/

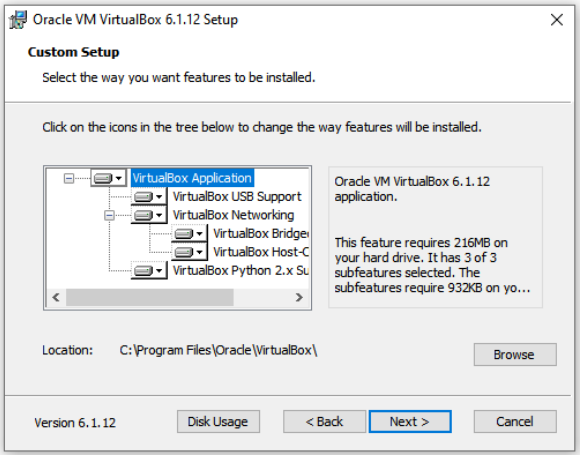


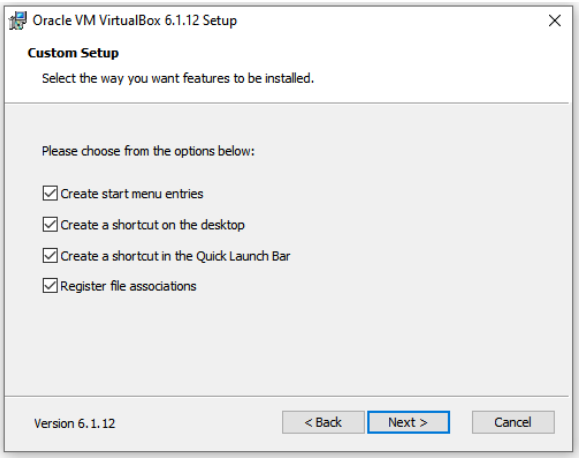
Download the system compatible with the characteristics of your computer.

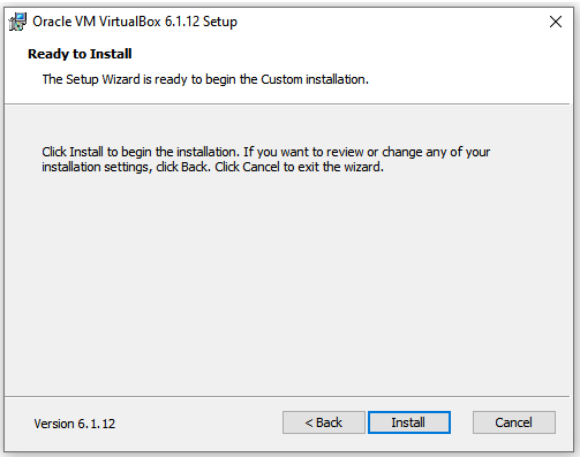
Now install VirtualBox

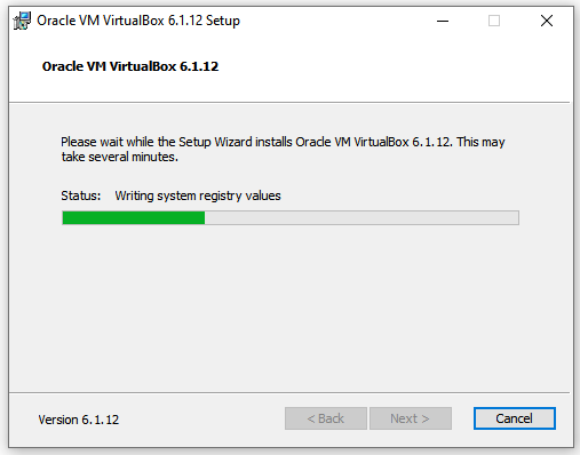
Double-click to start the installation

Just click on NEXT until the end of the installation, none of the additional settings need to be changed



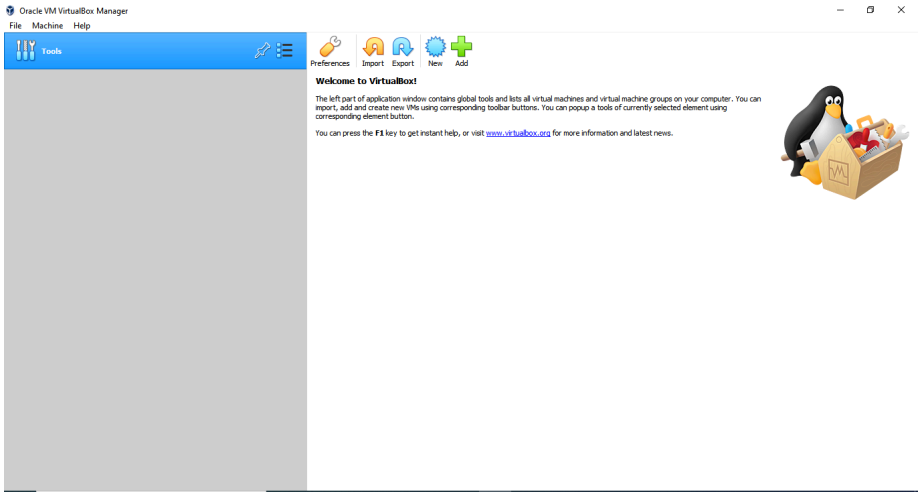




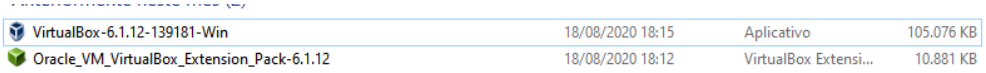


Wait for installation

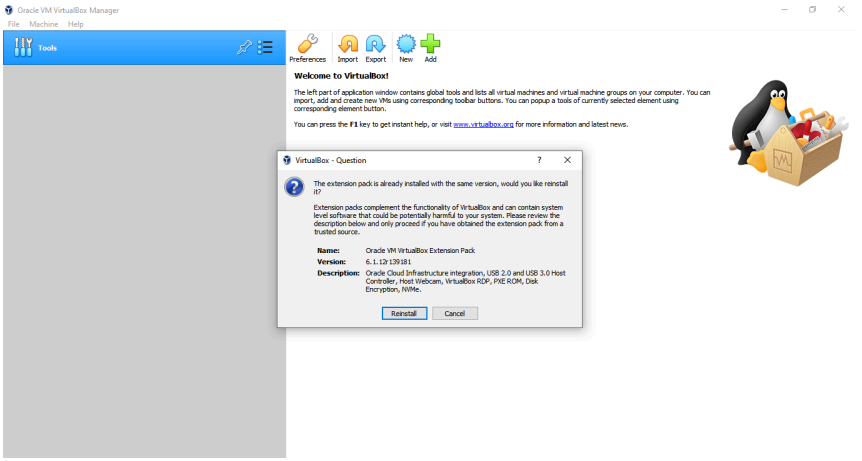
VirtualBox is now installed!

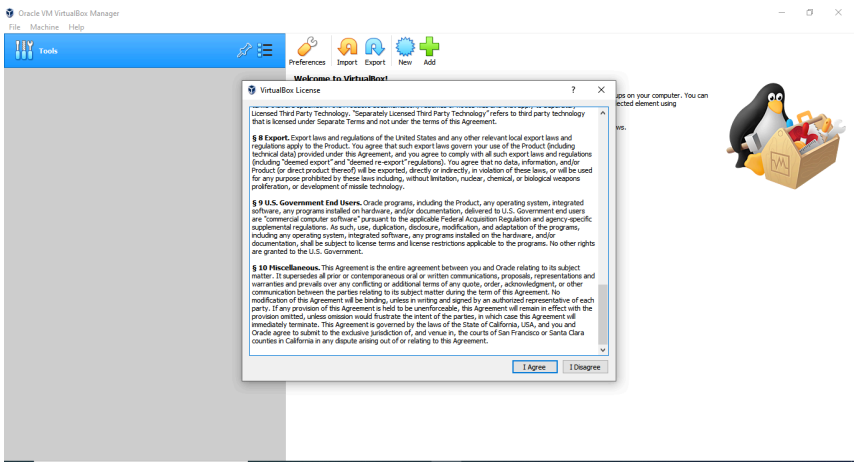


Close VirtualBox and get ready to install the extension package



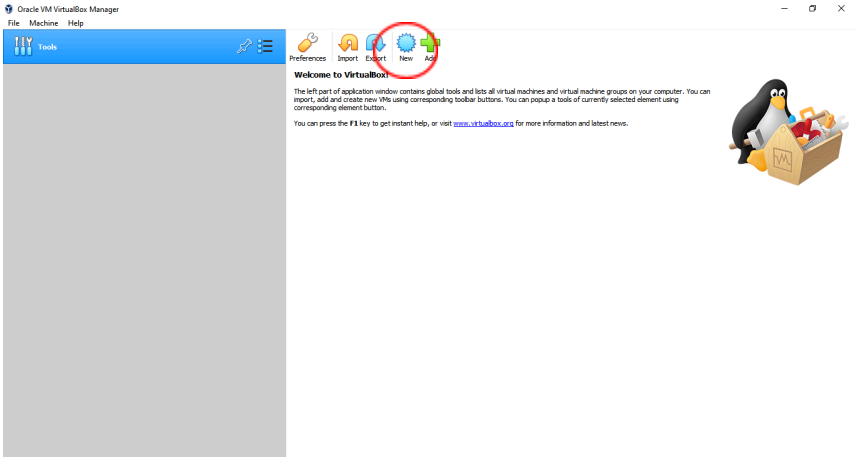
Double click on the extension package, VirtualBox will open, just click on REINSTALL



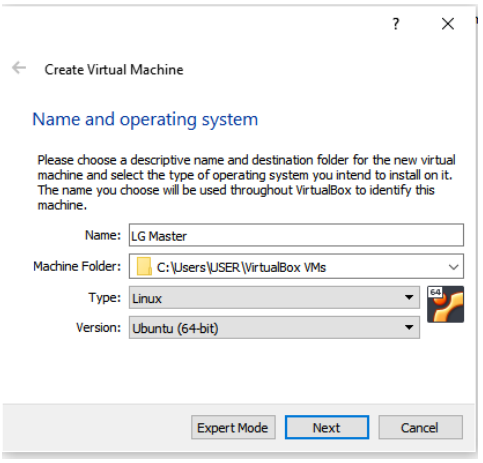


Read and accept the terms

Installing the first Virtual Machine



Click New

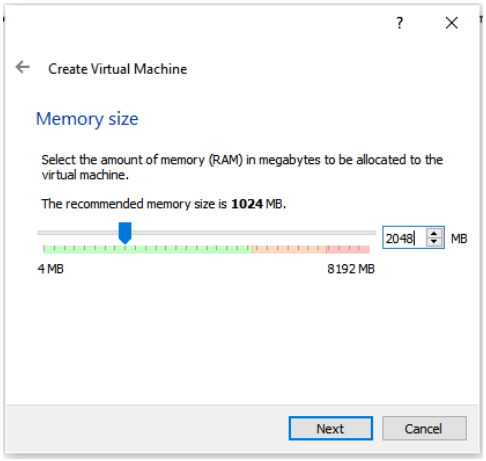


Name: You can give any name you want

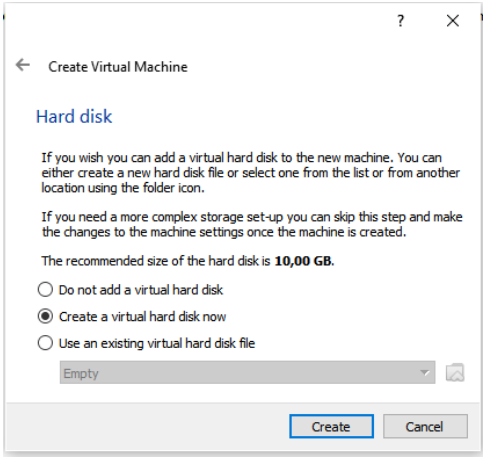
Type: Linux

Version: Ubuntu (64-bit) or Ubuntu (32-bit)

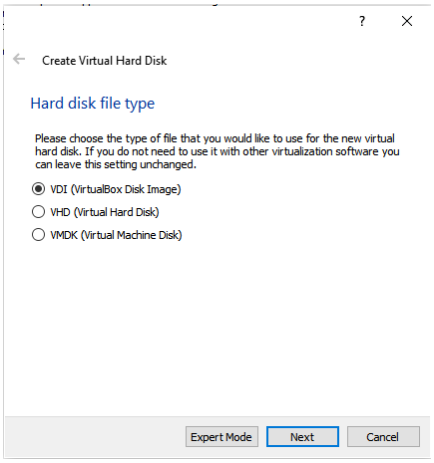
Click NEXT



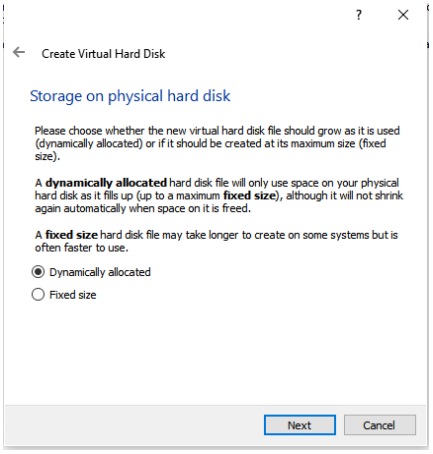
it is recommended to leave at least 2G of RAM, that is, your machine needs to have at least 8G of total ram so that the system can work minimally with the virtual machines running simultaneously. Click NEXT



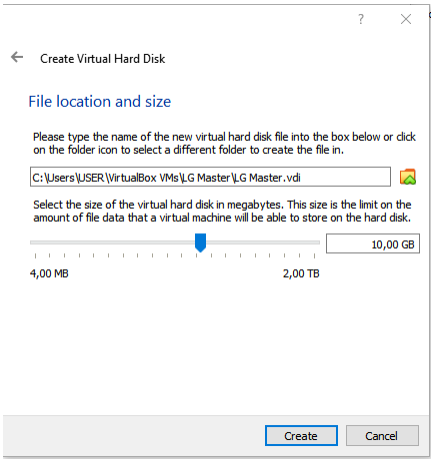
Click Create



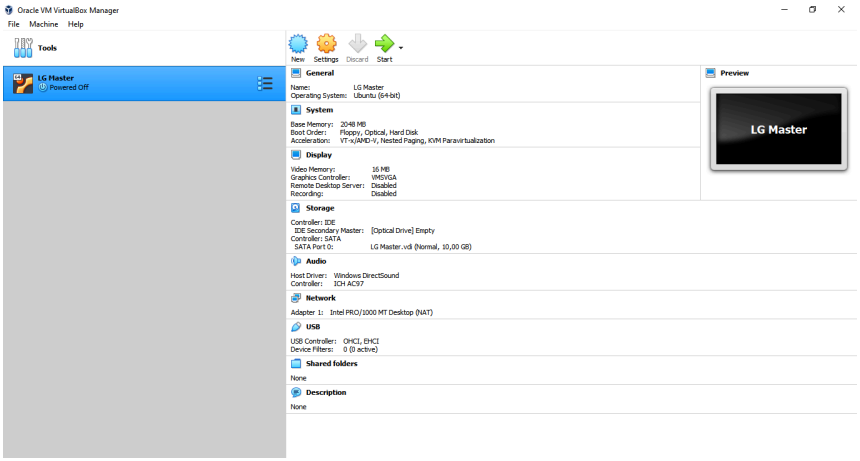
Click NEXT



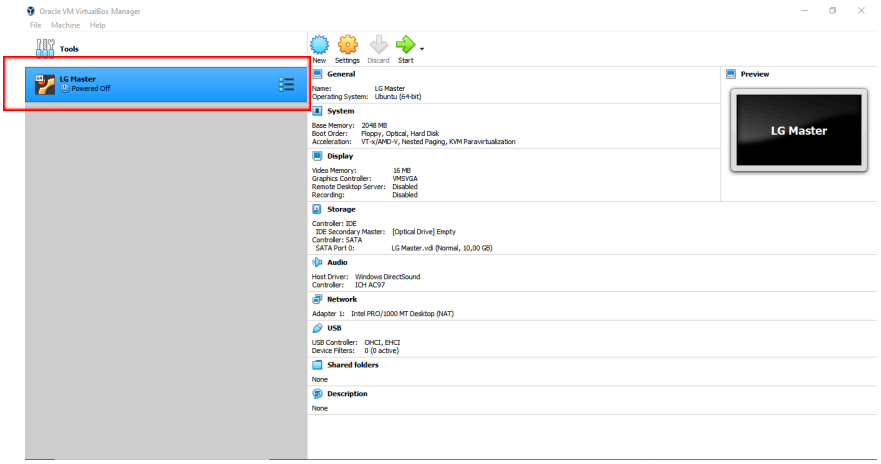
Click NEXT



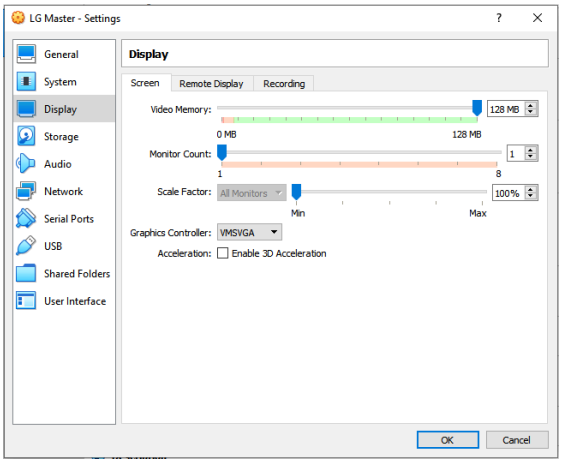
The recommended minimum memory space is 10GB but you can increase this size as you wish.



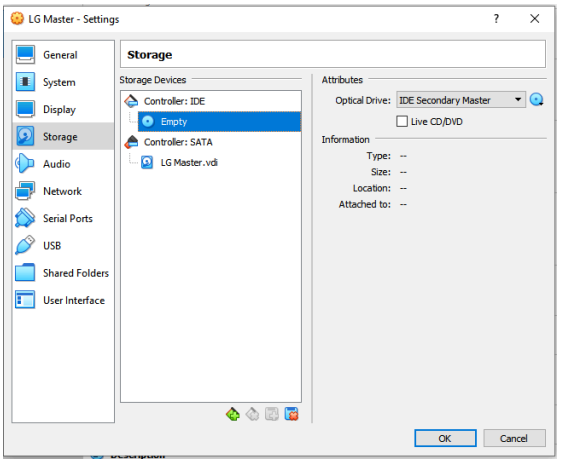
It is now necessary to configure the Virtual machine before proceeding with the installation.

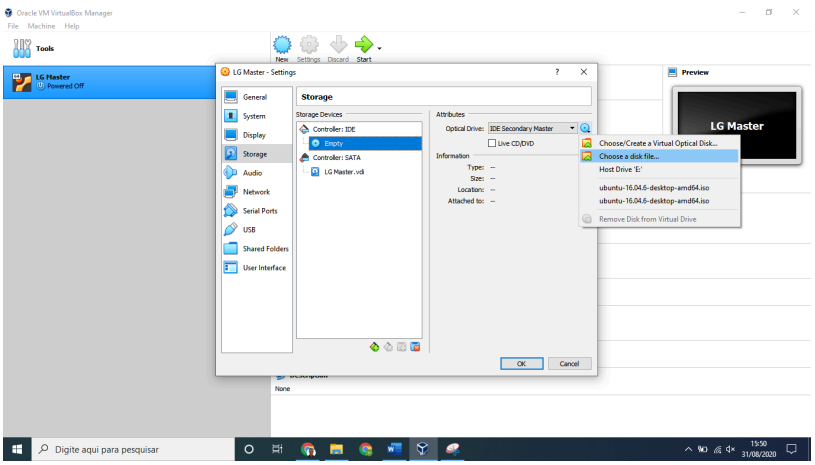


With the virtual machine selected click on SETTINGS



Set the video memory pointer to the maximum

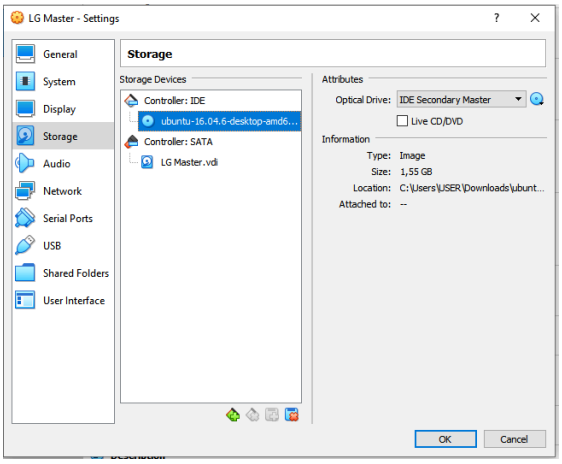




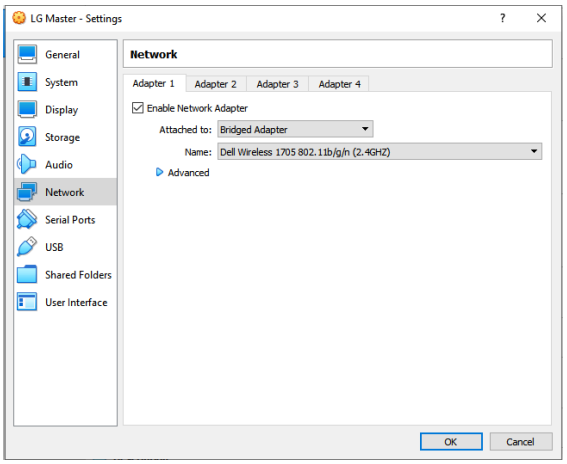
In STORAGE, click EMPTY and then CHOOSE A DISK FILE, as shown in the image.

Browse to the directory where you saved the UBUNTU 16.04 ISO image

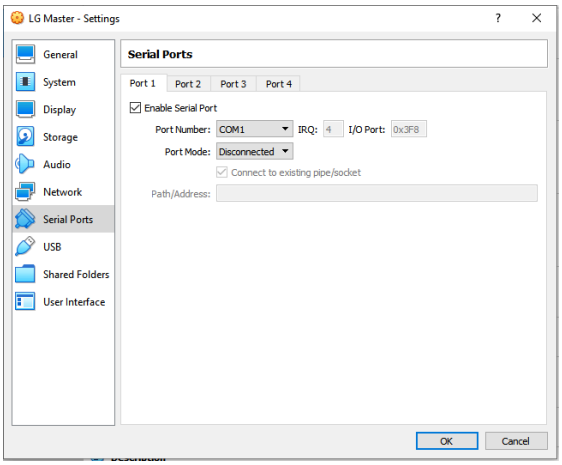
After selecting the ISO image the screen should look like this:



Click on NETWORK and select the bridge mode, as shown in the image

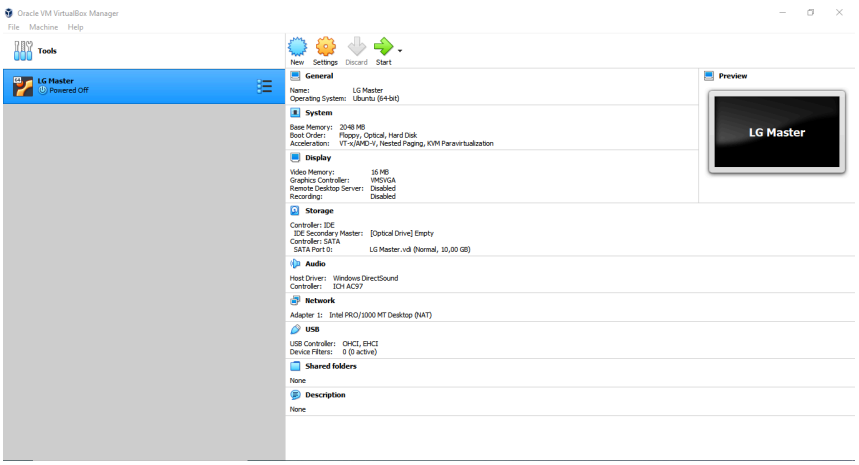


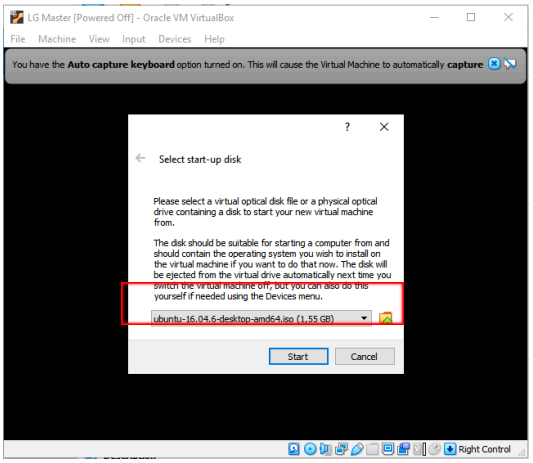
If you are going to use Serial devices on your virtual machine, enable the Serial ports. **FOR THE ARDUINO CONTROLLER PROJECT FOR LIQUID GALAXY THIS STEP IS MANDATORY**



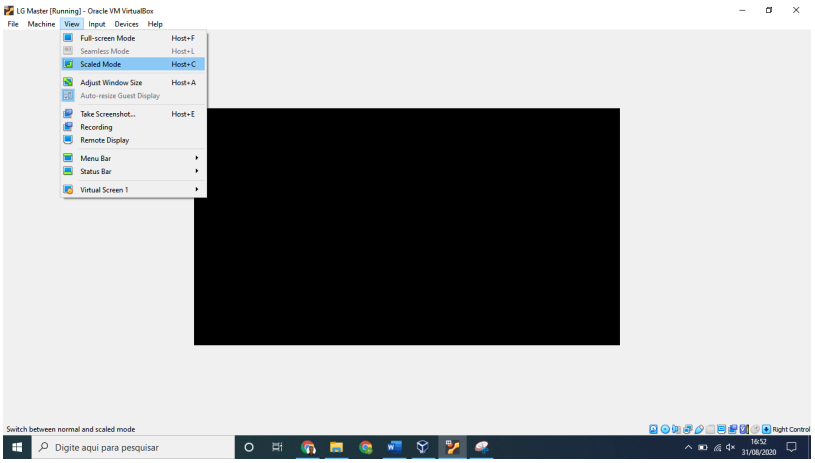
Click OK

With the virtual machine selected click on START

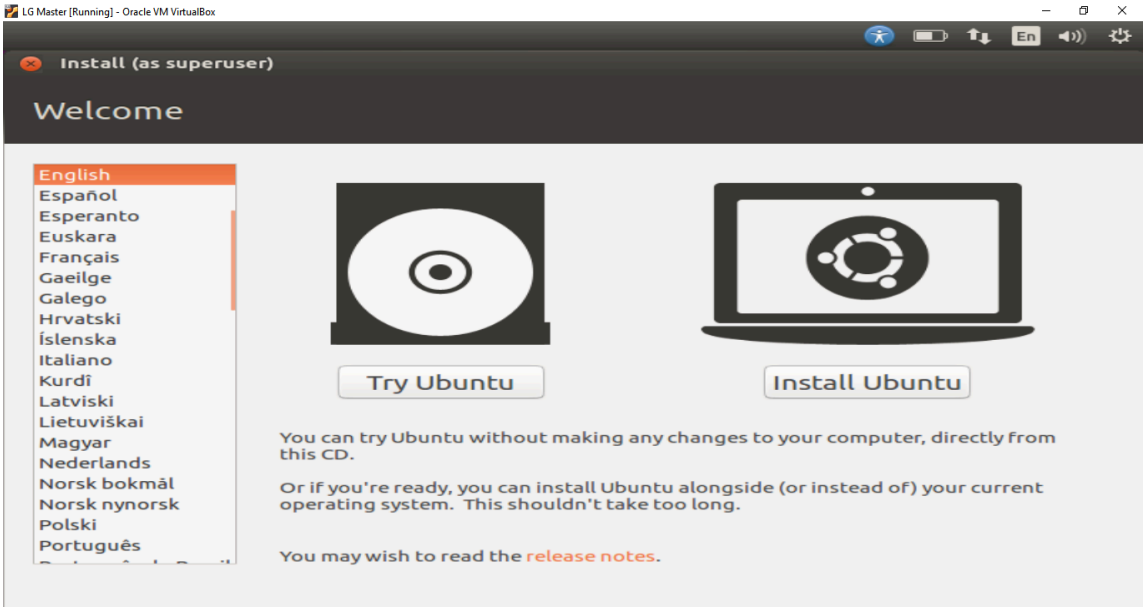




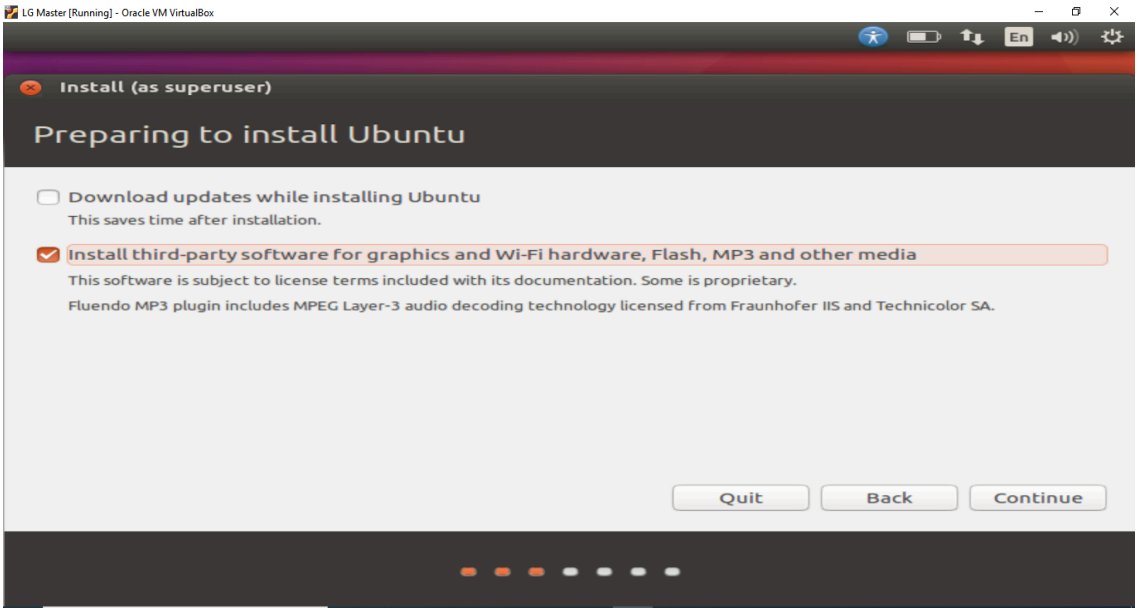
Select the iso image to be installed (UBUNTU 16.04). Click START



Select the scale mode so you can occupy the entire screen

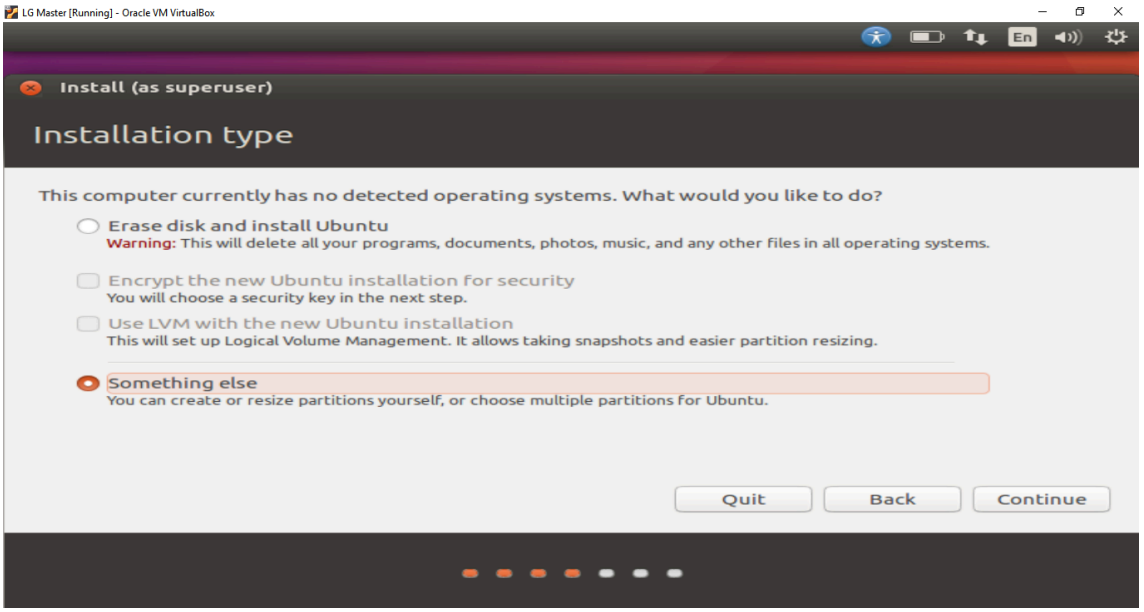


Select your language and click INSTALL UBUNTU

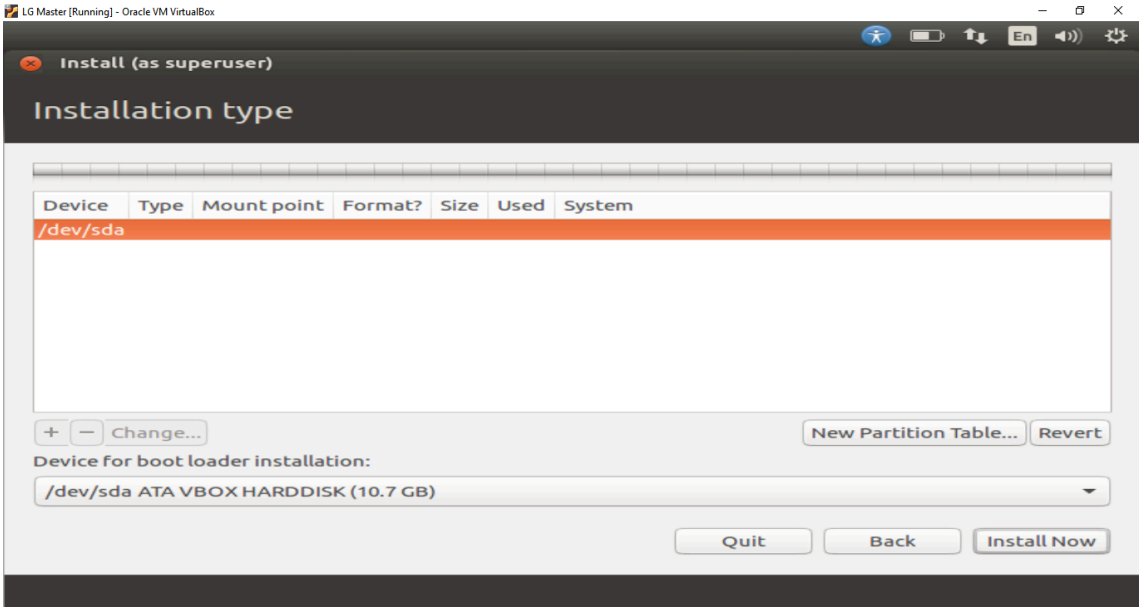


Select only the second checkbox

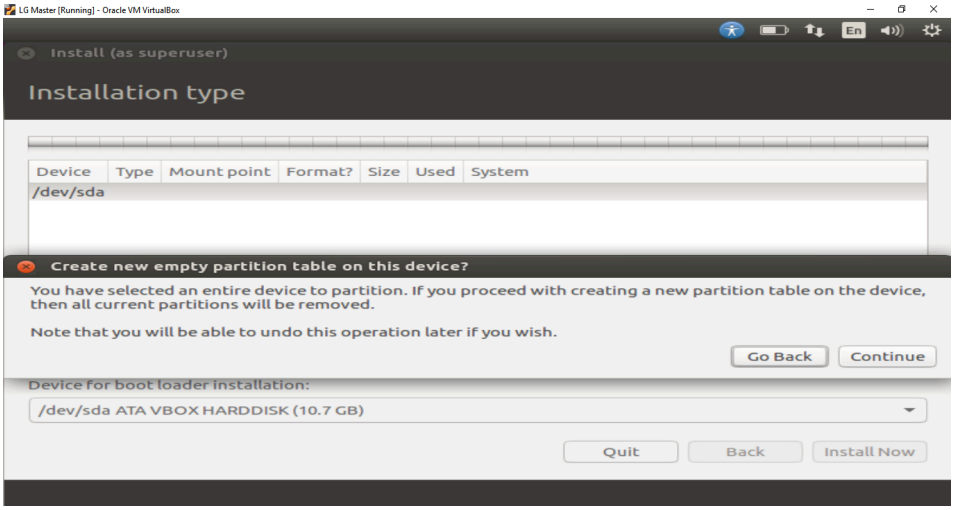
Select the last checkbox



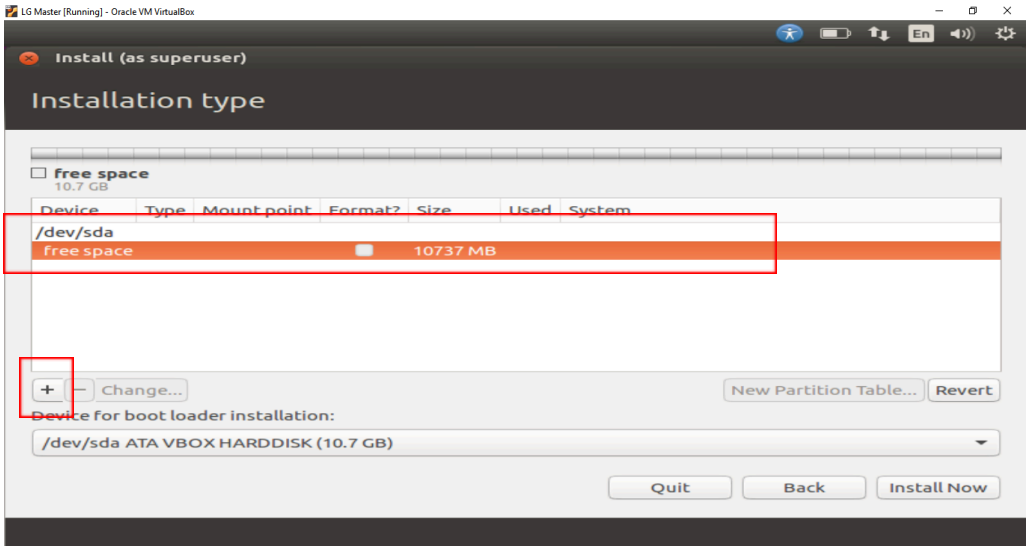
Click NEW PARTITION TABLE



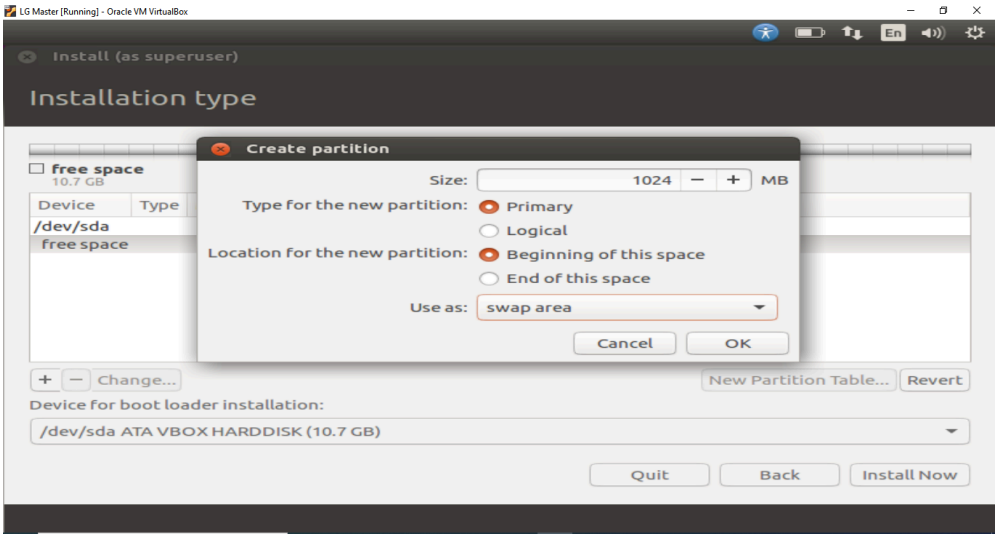
CONTINUE



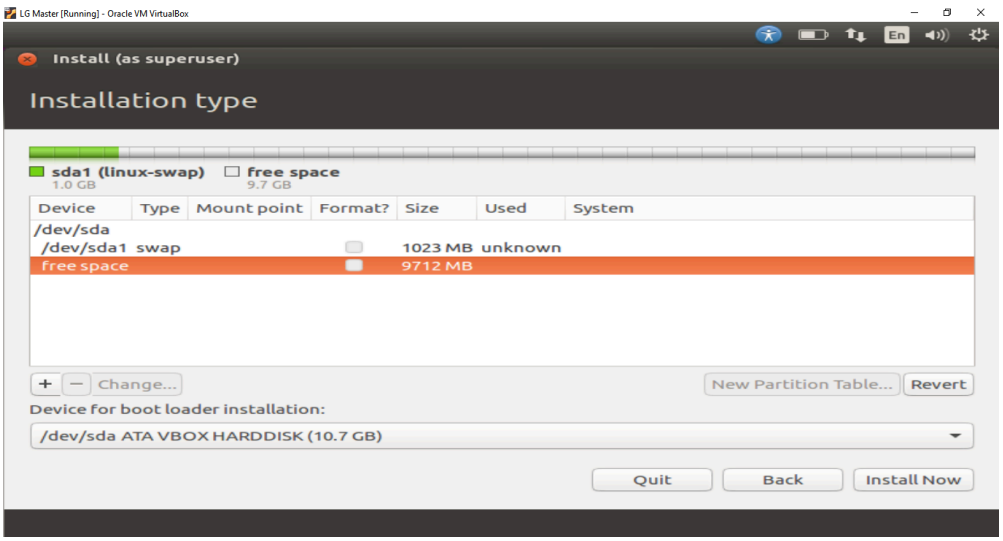
Select the new free space created and click the MORE button



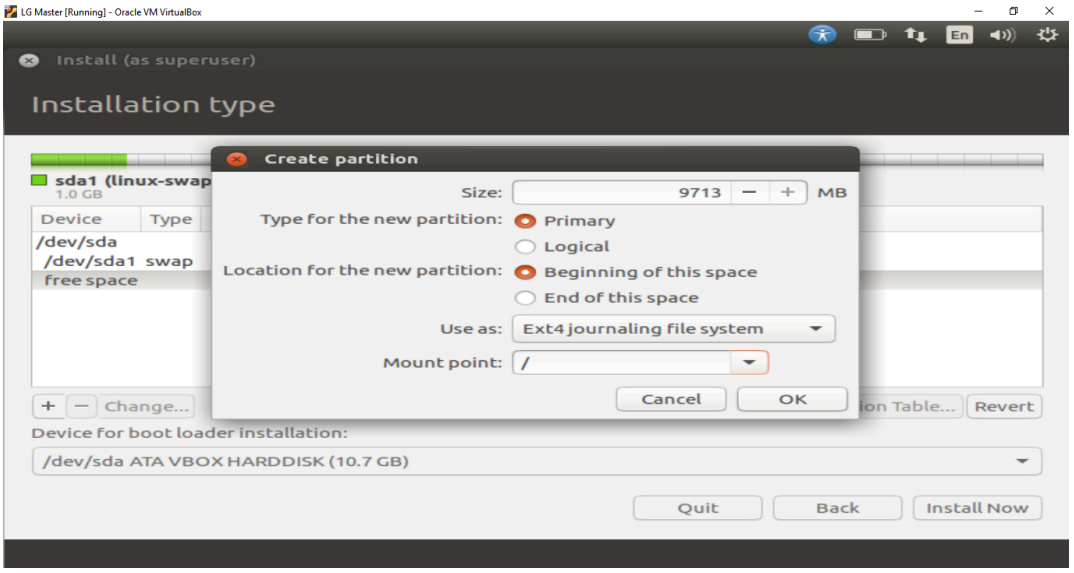
Separate 1GB for MEMORY SWAP and click OK



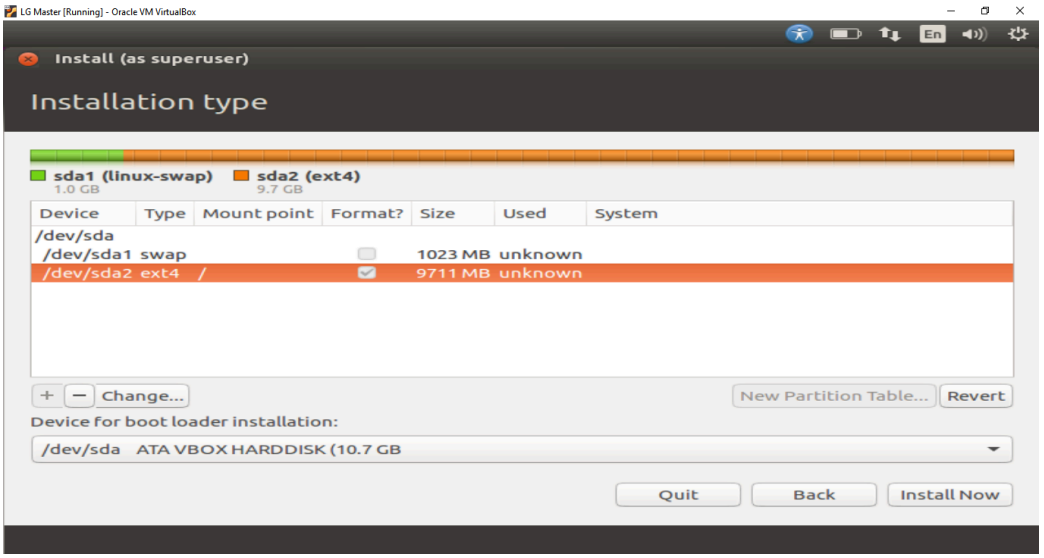
Select the free partition and click the MORE button again



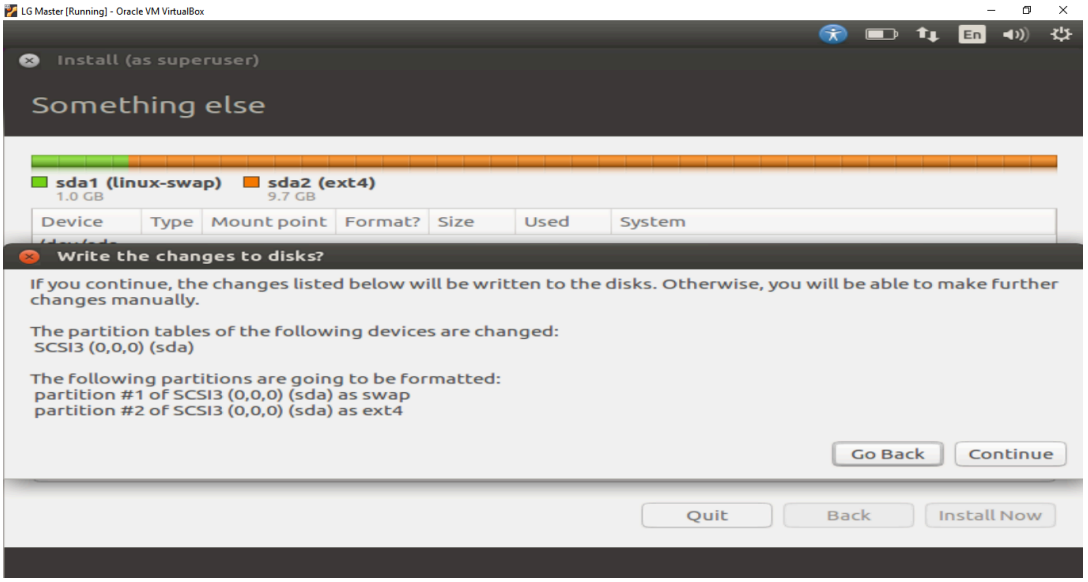
Configure according to the image below. Click OK



Select the installation line as shown in the image and click INSTALL NOW

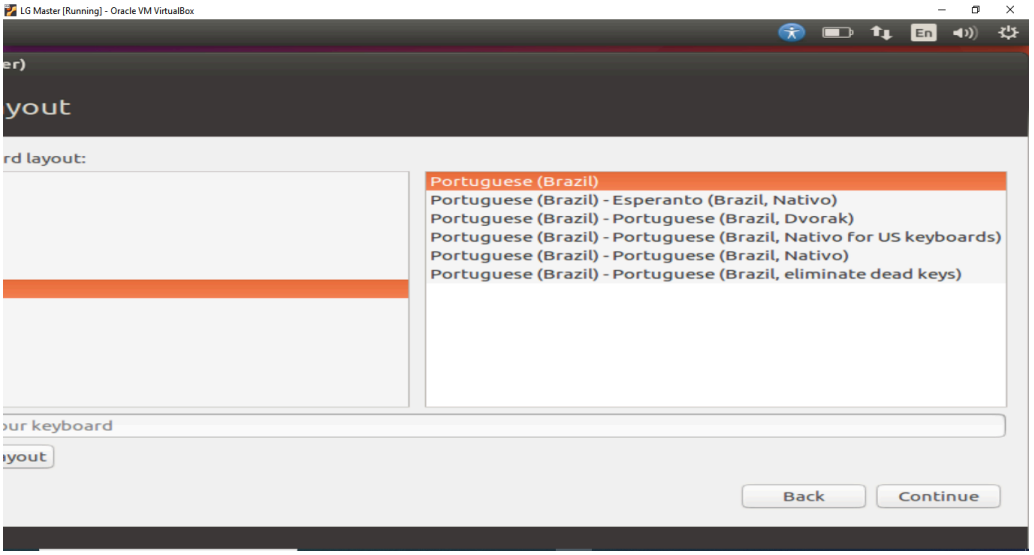


Click CONTINUE

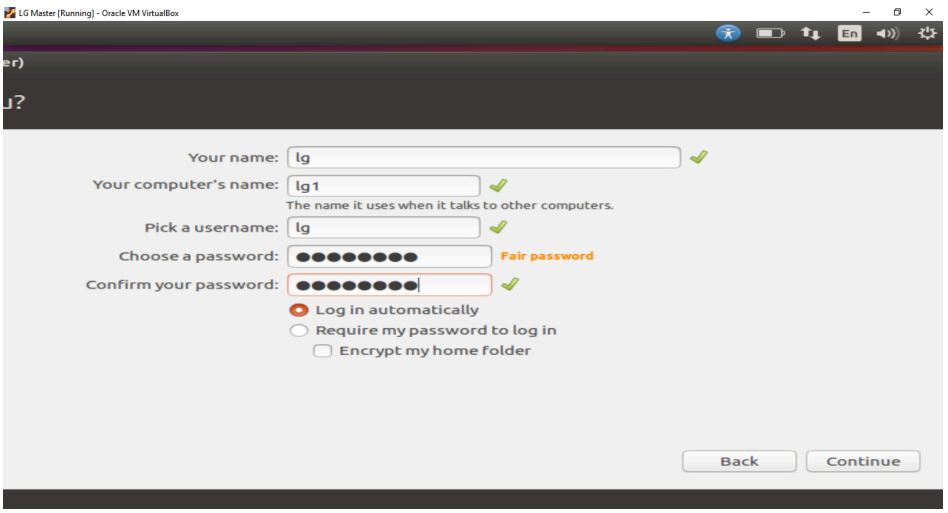


Select time zone

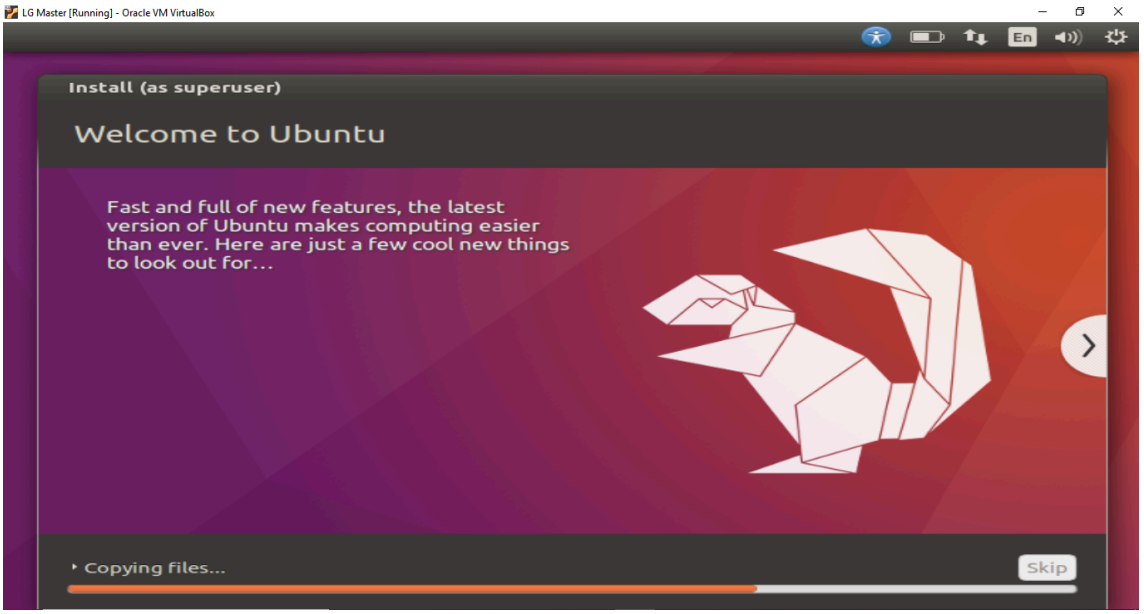
Select the keyboard format



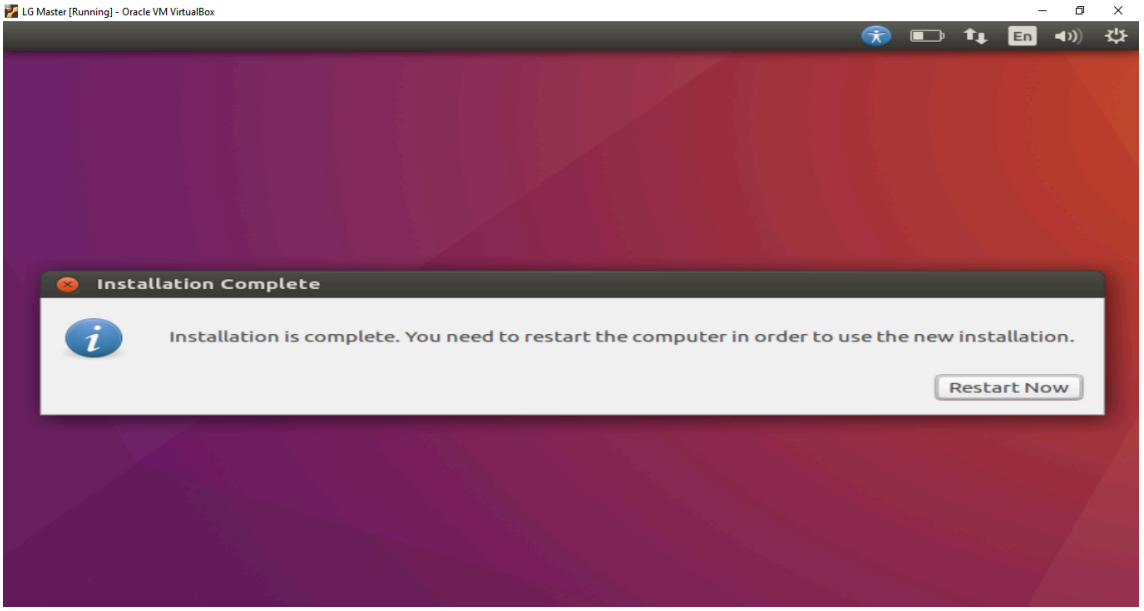
Much attention in this step. The computer name must be lg1 for the master, lg2 and lg3 for the slaves. YOUR NAME and PICK A USERNAME must always be lg



Wait for the installation. This process takes a few minutes.



Click TESTART NOW

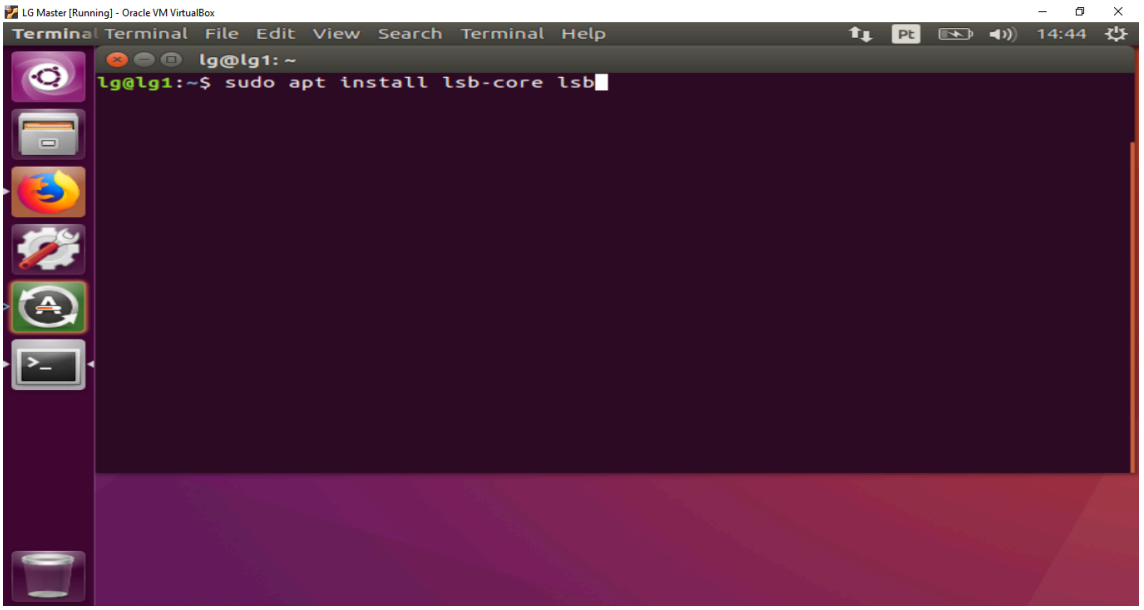


Access the Liquid Galaxy project repository on GitHub

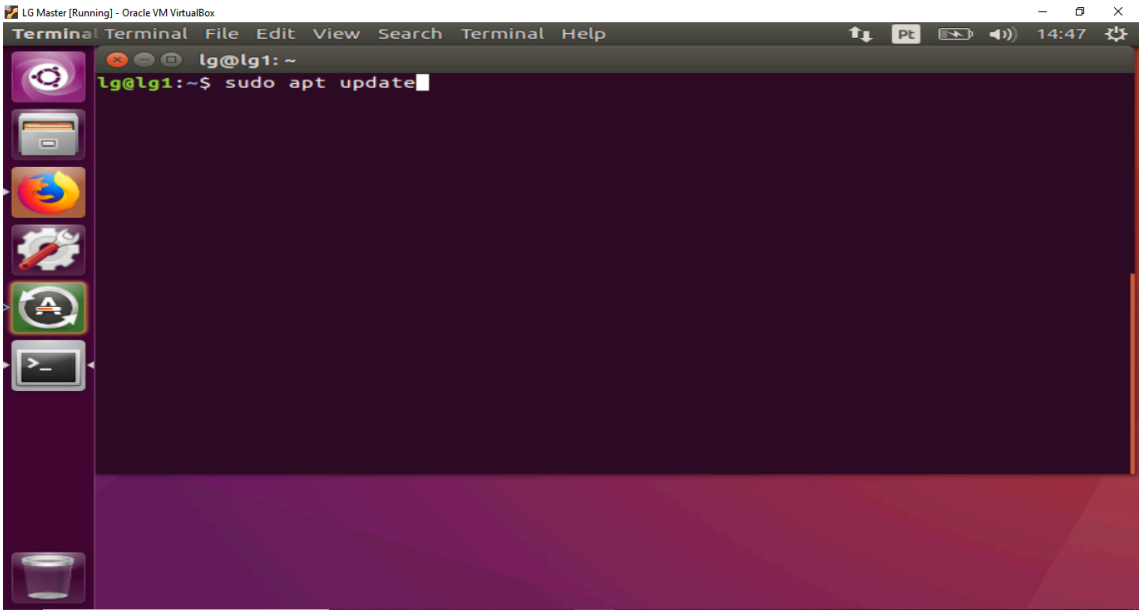
https://github.com/LiquidGalaxyLAB/liquid-galaxy

Open a terminal **(CTRL + Alt + t)**

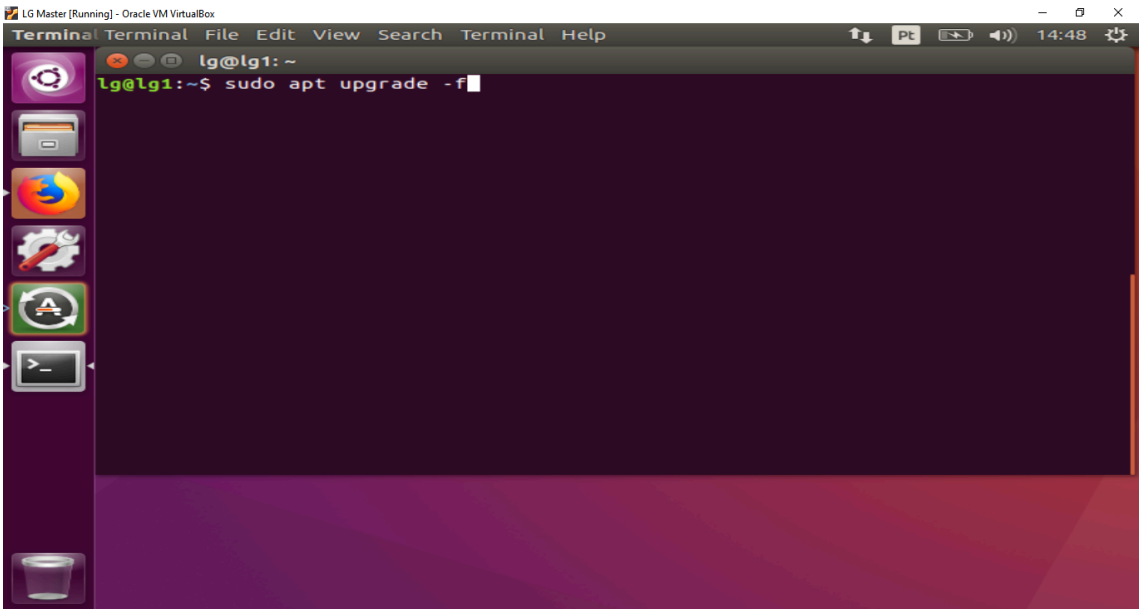
$ sudo apt install lsb-core lsb



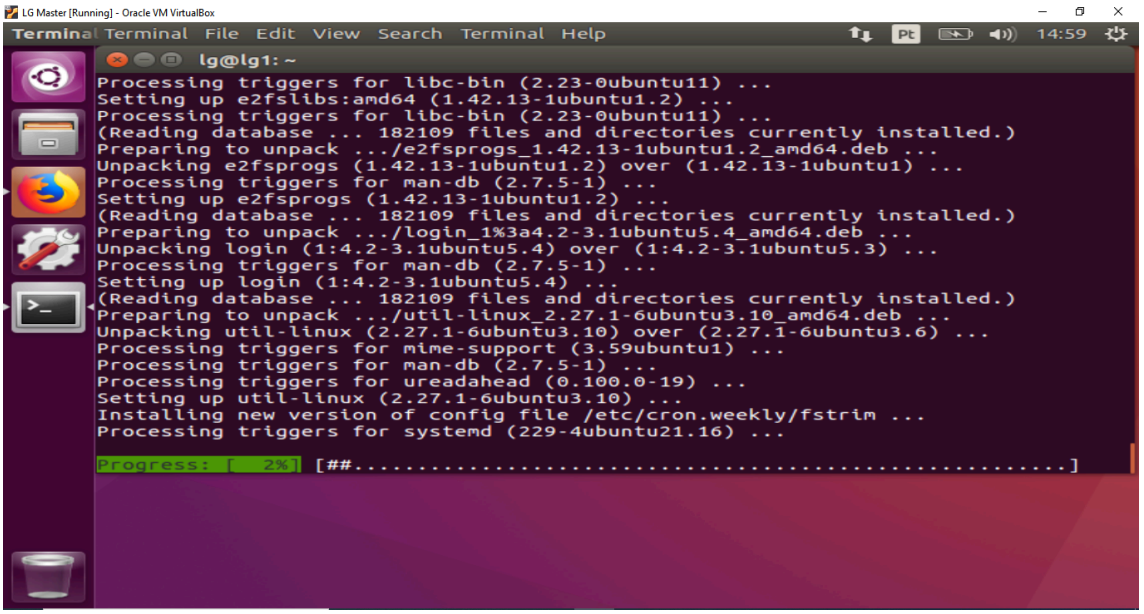
$ sudo apt update



$ sudo apt upgrade -f

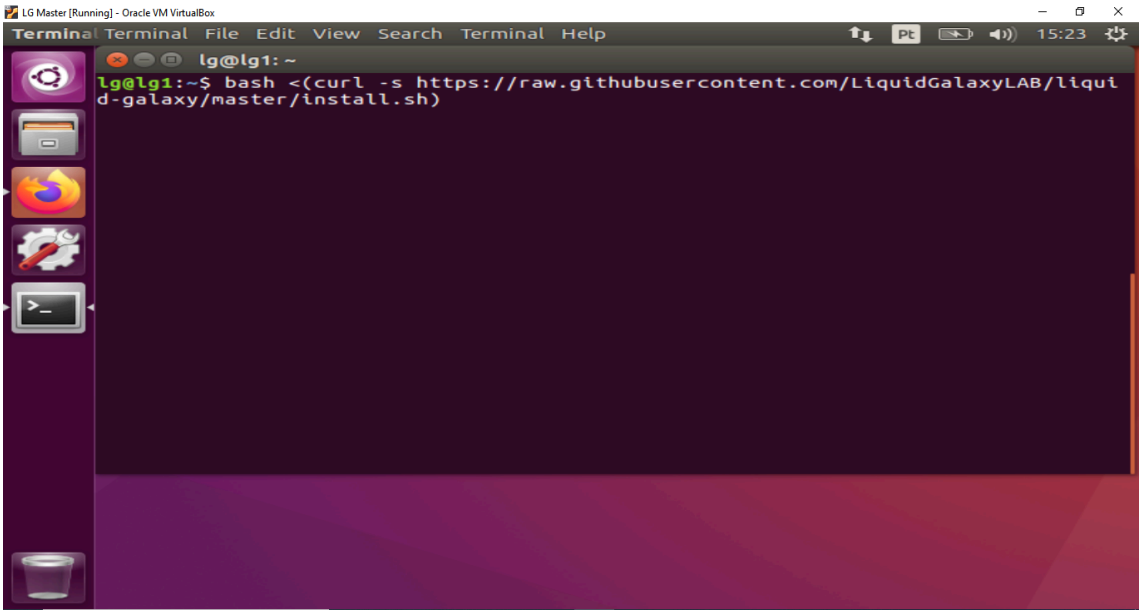


The upgrade process takes a few minutes.

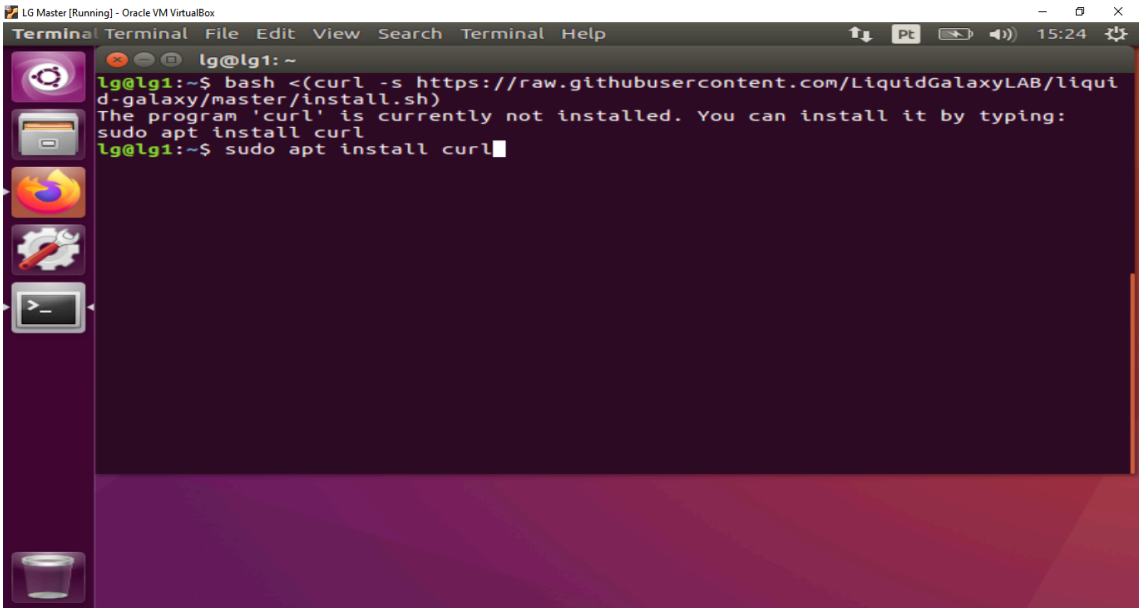


Installing Liquid Galaxy

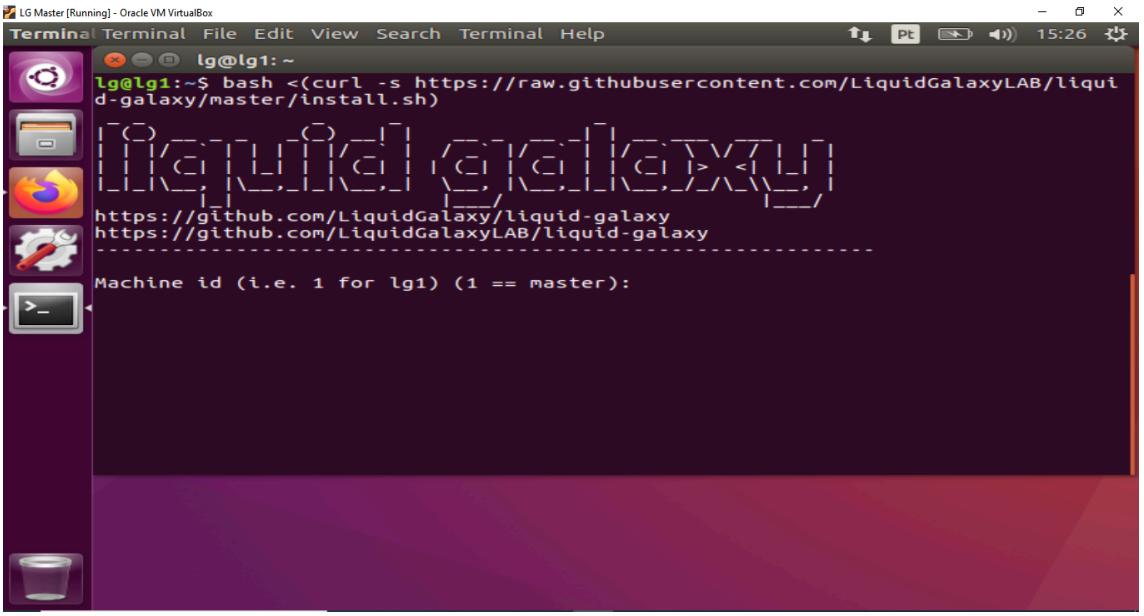
```
$ bash <(curl -s https://raw.githubusercontent.com/LiquidGalaxyLAB/liquid-galaxy/master/install.sh)
```

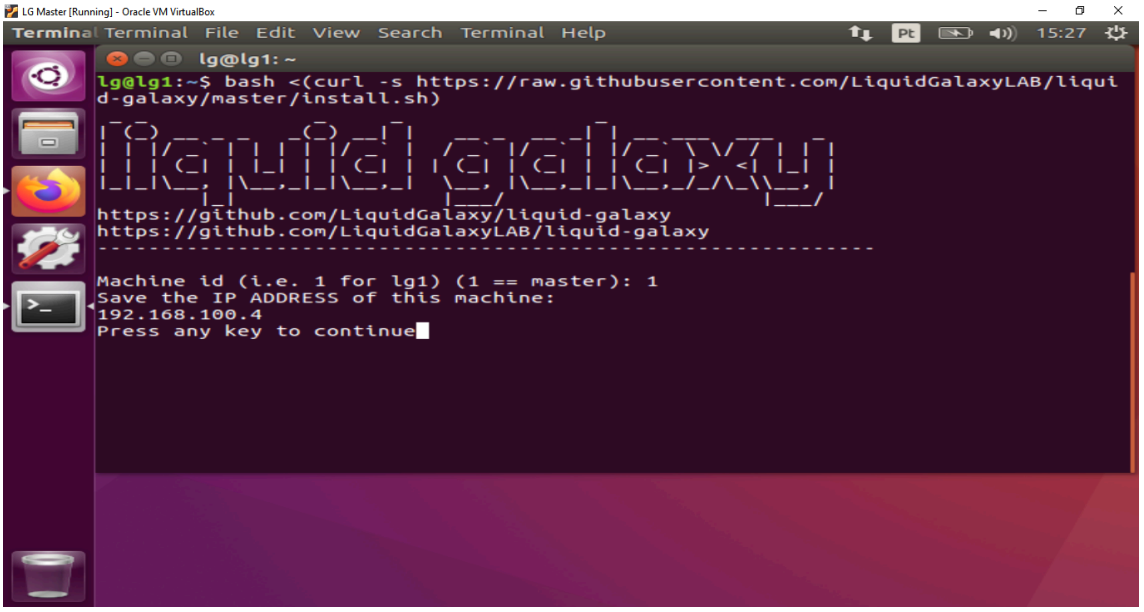


If you don't have CURL installed this message will be displayed, just install CURL with the command: `$ sudo apt install curl`



After installing CURL proceed with the installation of LIQUID GALAXY

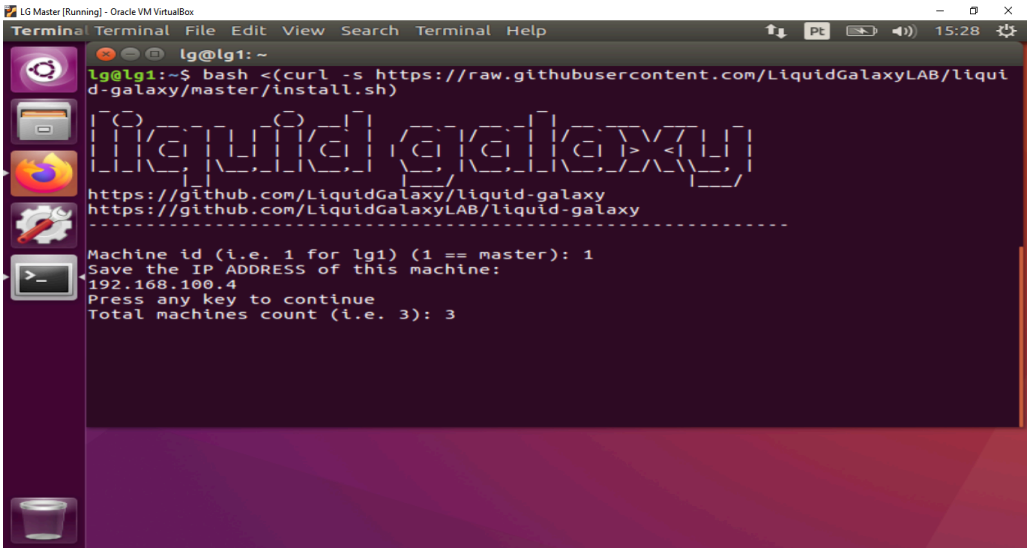




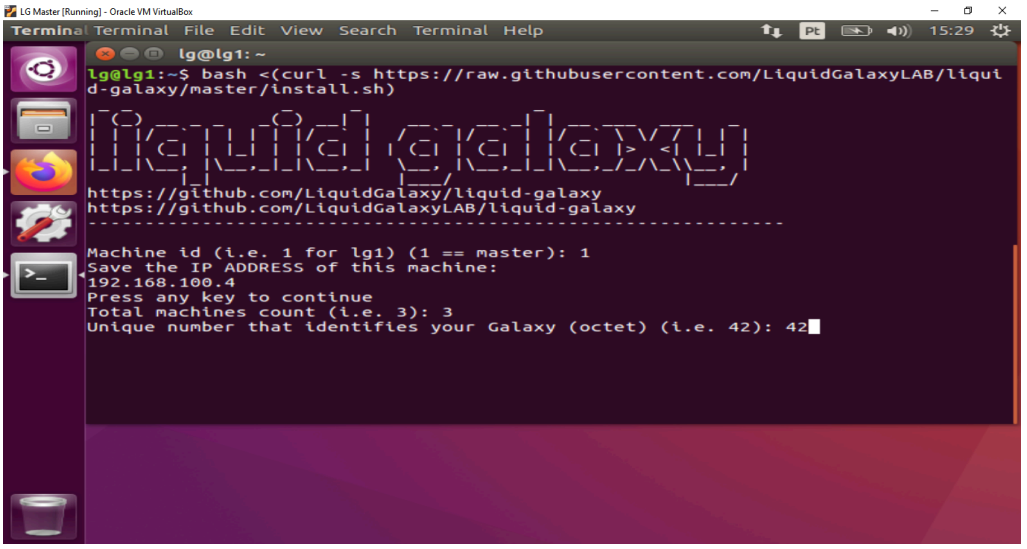
Choose number 1 for the MASTER computer and 2 and 3 for the slaves

Save the IP number of the master pc

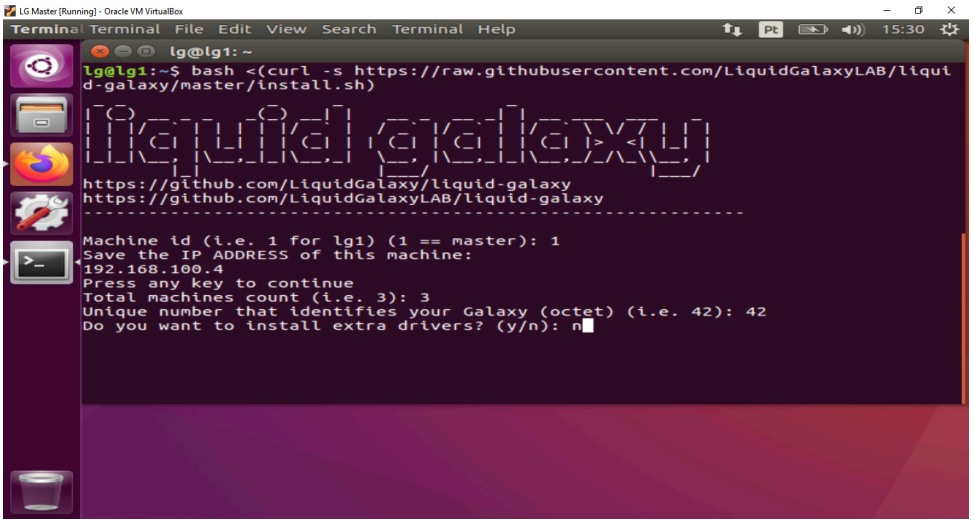
Total machines 3



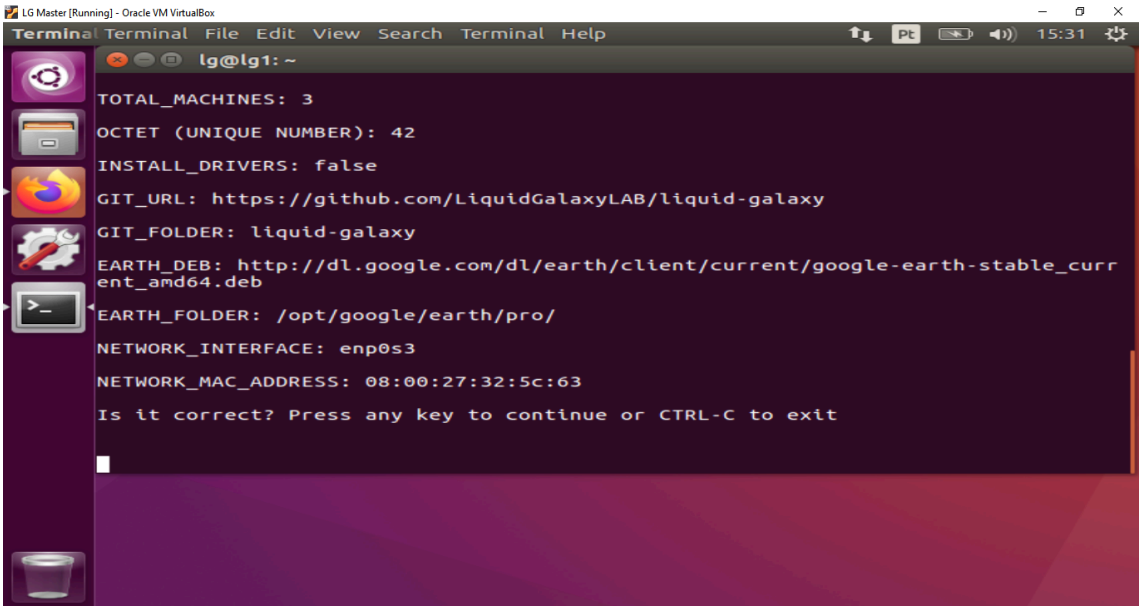
OCTET: 42



To install additional drivers, type the letter n



Press any key to continue



After installation, the side toolbar will be hidden and Google Earth will open automatically.

To continue with the installation of the slaves, keep the master machine open at all times.

Slaves need to connect to the master to complete their installations.

The complete process can be seen here:
https://www.youtube.com/watch?v=8R__KnPPErQ&t=16s