

1 Ubuntu 系统准备

Ubuntu 系统: <https://ubuntu.com/download#download>

UEFI: <https://www.easyuefi.com/>

DiskGenius: <https://www.diskgenius.com/download.php>

Ultraiso: <http://www.ultraiso.net>

```
sudo apt-get install vim
```

```
sudo su
```

2 Ubuntu 屏幕分辨率异常

Ubuntu18.04 永久设置分辨率1920x1080

起因

虚拟机(virtualBox)中设置 1920*1080 的分辨率后, 每次重启后都会回到默认, 永久设置的方式如下

步骤:

- 添加系统设置

```
sudo xrandr --newmode "1920x1080_60.00" 173.00 1920 2048 2248 2576 1080 1083 1088 1120 -hsync +vsync
```

```
sudo xrandr --addmode Virtual1 "1920x1080_60.00"
```

此时系统设置里已经有 1920*1080 的分辨率选项

- 打开开机启动配置

```
sudo vim /etc/profile
```

- 按键 i 进入编辑模式, 按箭头下键把光标移动到文件最底部添加下面的内容

```
xrandr --newmode "1920x1080_60.00" 173.00 1920 2048 2248 2576 1080 1083 1088 1120 -hsync +vsync
```

```
xrandr --addmode Virtual1 "1920x1080_60.00"
```

- 按键 Esc 然后输入 :wq 回车, 保存退出.
- 重启

```
sudo reboot
```

```
yjb@yjb-W560-G30:~$ xrandr
Screen 0: minimum 320 x 200, current 1024 x 768, maximum 1920 x 2048
VGA-1 connected primary 1024x768+0+0 (normal left inverted right x axis y axis) 0mm x 0mm
   1024x768    60.00*
   800x600     60.32    56.25
   640x480     59.94

yjb@yjb-W560-G30:~$ sudo su
[sudo] yjb 的密码:
对不起，请重试。
[sudo] yjb 的密码:
root@yjb-W560-G30:/home/yjb# cvt 1920 1080
# 1920x1080 59.96 Hz (CVT 2.07M9) hsync: 67.16 kHz; pclk: 173.00 MHz
Modeline "1920x1080_60.00" 173.00 1920 2048 2248 2576 1080 1083 1088 1120 -hsync +vsync
root@yjb-W560-G30:/home/yjb# sudo xrandr --newmode "1920x1080_60.00"173.00 1920 2048 2248 2576 1080 1083 1088 1120 -hsync +vsync
xrandr: failed to parse '-hsync' as a number
Try 'xrandr --help' for more information.
root@yjb-W560-G30:/home/yjb# sudo xrandr
root@yjb-W560-G30:/home/yjb# sudo xrandr --newmode "1920x1080_60.00" 173.00 1920 2048 2248 2576 1080 1083 1088 1120 -hsync +vsync
root@yjb-W560-G30:/home/yjb# xrandr
Screen 0: minimum 320 x 200, current 1024 x 768, maximum 1920 x 2048
VGA-1 connected primary 1024x768+0+0 (normal left inverted right x axis y axis) 0mm x 0mm
   1024x768    60.00*
   800x600     60.32    56.25
   640x480     59.94
   1920x1080_60.00 (0x2e6) 173.00MHz -HSync +VSync
      h: width 1920 start 2048 end 2248 total 2576 skew 0 clock 67.16KHz
      v: height 1080 start 1083 end 1088 total 1120 clock 59.96Hz
root@yjb-W560-G30:/home/yjb# sudo xrandr --addmode VGA-1 "1920x1080_60.00"
root@yjb-W560-G30:/home/yjb#
```

3 配置显卡

3.1 禁用 nouveau

- 1.nouveau 开启
lsmod | grep nouveau
2. 打开编辑配置文件
sudo gedit /etc/modprobe.d/blacklist.conf
3. 在最后一行添加以下命令, 禁用第三方驱动
blacklist nouveau
4. 使命令生效
sudo update-initramfs -u
5. 重启
sudo reboot
6. 验证 nouveau 禁用
lsmod | grep nouveau

3.2 安装驱动

1. 查看显卡
ubuntu-drivers devices
2. 去 NVIDIA driver search page(<https://www.nvidia.com/Download/index.aspx>)
查看支持显卡的驱动的最新版本的版本号
3. 安装相关包
sudo apt update
sudo apt install build-essential

```
gcc --version
```

4. 安装驱动

```
sudo bash NVIDIA-Linux....run
```

5. 重启电脑

```
sudo reboot
```

6. 查看安装版本

```
nvidia-smi
```

3.3 安装 cuda

[https://developer.nvidia.com/cuda-downloads?target_os=Linux&target_arch=x86_64
&Distribution=Ubuntu&target_version=18.04&target_type=runfile_local](https://developer.nvidia.com/cuda-downloads?target_os=Linux&target_arch=x86_64&Distribution=Ubuntu&target_version=18.04&target_type=runfile_local)

```
sudo sh cuda... -help
```

```
nvcc --version
```

```
sudo vim ~/.bashrc
```

在该文件中加入以下命令

```
export CUDA_HOME=/usr/local/cuda-11.1
```

```
export LD_LIBRARY_PATH=/usr/local/cuda-11.1/lib64:$LD_LIBRARY_PATH
```

```
export PATH=/usr/local/cuda-11.1/bin:$PATH
```

```
source ~/.bashrc
```

3.4 安装 cudnn

<https://developer.nvidia.com/rdp/form/cudnn-download-survey>

选择与 cuda 10.1 对应的版本 (7.6.5)，点开选择 cudnn library for linux，点击下载。（最好选择 cudnn library for linux 这个文件格式安装比较方便）

```
# 复制 cudnn 头文件
```

```
sudo cp cuda/include/* /usr/local/cuda-11.1/include/
```

```
# 复制 cudnn 的库
```

```
sudo cp cuda/lib64/libcudnn* /usr/local/cuda-11.1/lib64/
```

```
# 添加可执行权限
```

```
sudo chmod +x /usr/local/cuda-11.1/include/cudnn_version.h(cudnn.h)
```

```
sudo chmod +x /usr/local/cuda-11.1/lib64/libcudnn*
```

```
# 查看 cudnn 的版本号
```

```
cat /usr/local/cuda/include/cudnn_version.h | grep CUDNN_MAJOR -A 2
```

4 配置环境

4.1 安装 Anaconda

Step1:Update Local Package Manager

```
sudo apt-get update
```

```
sudo apt-get install wget
```

Step2:Download the latest version of anaconda

```
https://www.anaconda.com/products/individual-d
```

or use wget command to download the files

```
wget https://repo.anaconda.com/archive/Anaconda3-2021.05-Linux-x86_64.sh
```

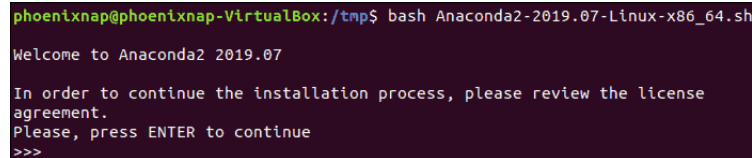
Step3:Verify the download checksum

```
sha256sum Anaconda3-2021.05-Linux-x86_64.sh
```

then your system will display a series of letters and numbers.

Step4:Run anaconda installation script

```
sudo bash Anaconda3-2021.05-Linux-x86_64.sh -p /usr/local/ -u
```



```
phoenixnap@phoenixnap-VirtualBox:/tmp$ bash Anaconda2-2019.07-Linux-x86_64.sh
Welcome to Anaconda2 2019.07

In order to continue the installation process, please review the license
agreement.
Please, press ENTER to continue
>>>
```

Step5:Add the path to the system

```
sudo gedit ~/.bashrc
```

```
#export PATH= /usr/local/anaconda3/bin:$PATH
```

```
source ~/.bashrc
```

```
conda info
```

Step6:Update anaconda on ubuntu

```
conda update conda
```

```
conda update anaconda
```

Step7:Command about anaconda environments

```
sudo conda creat --name test_environment python=3.8
```

```
conda info --envs
```

```
conda activate test_environment
```

```
conda remove --name test_environment --all
```

解决 sudo conda 无法创建环境

```
vim ~/.bashrc
```

```
alias sudo="sudo env PATH=$PATH"
```

```
source ~/.bashrc
```