Creality Sonic Pad

自定义机型固件编译指导书

1、下载安装 VirtualBox

2、下载 Ubuntu

3、新建虚拟机并安装 Ubuntu 系统

4、系统升级及安装 git 环境

5、下载 Klipper 固件

6、配置打印机固件

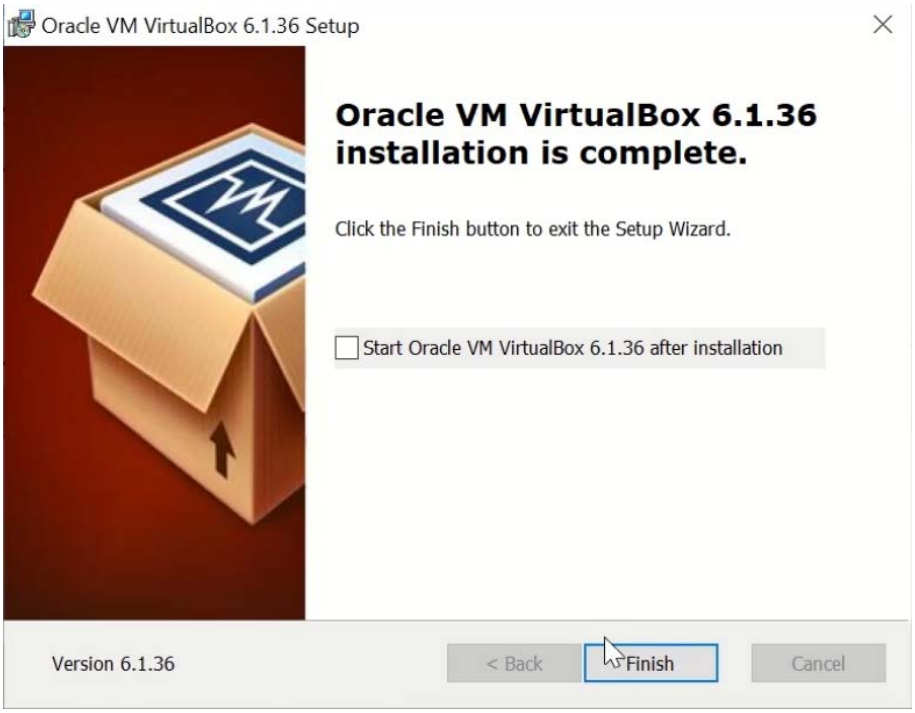
7、通过 SD/TF 卡升级打印机固件

8、配置 USB 升级打印机固件

1、 下载安装 VirtualBox

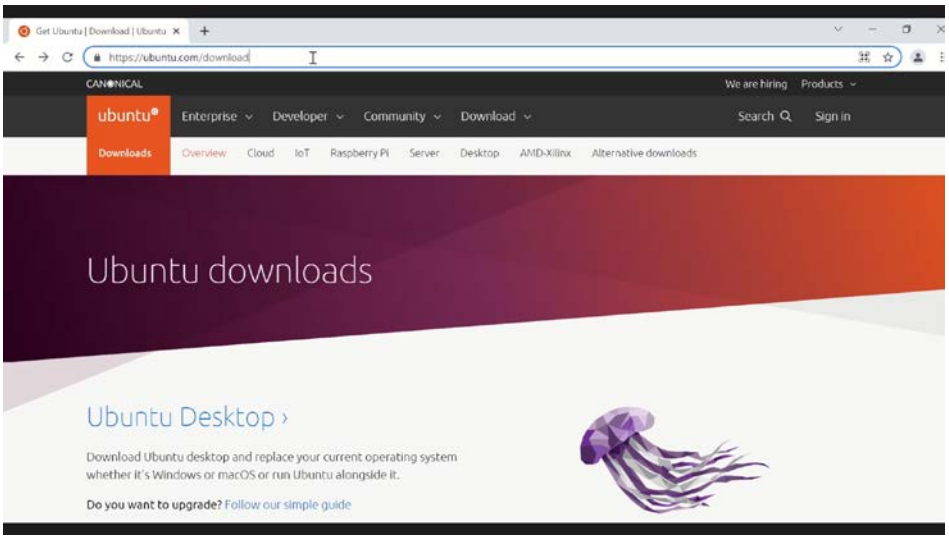
在 www.VirtualBox.org 下载 VirtualBox

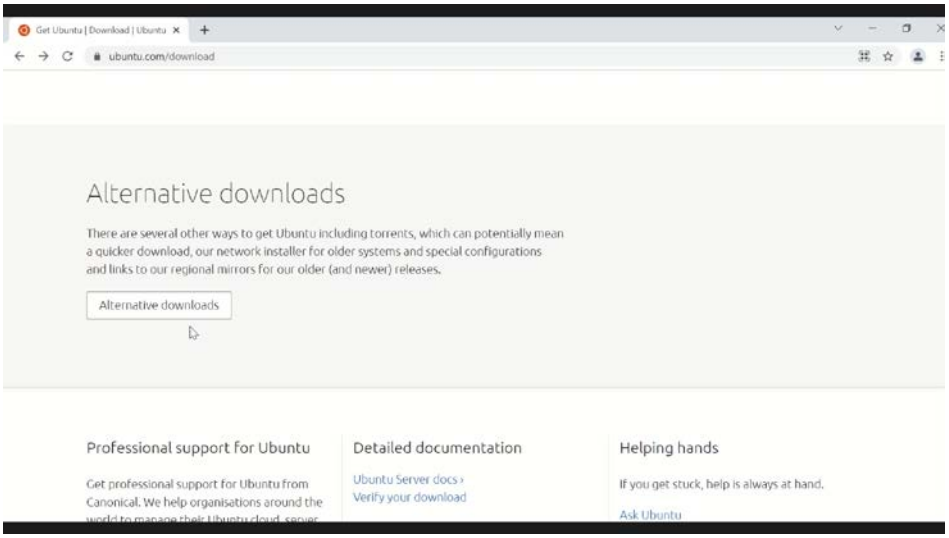
下载完成后安装 VirtualBox（安装完成后先不要打开）

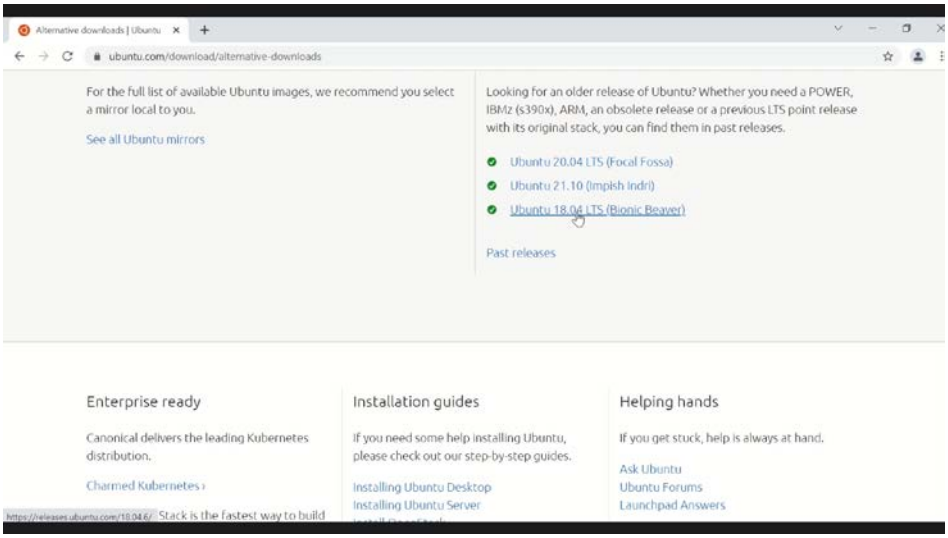


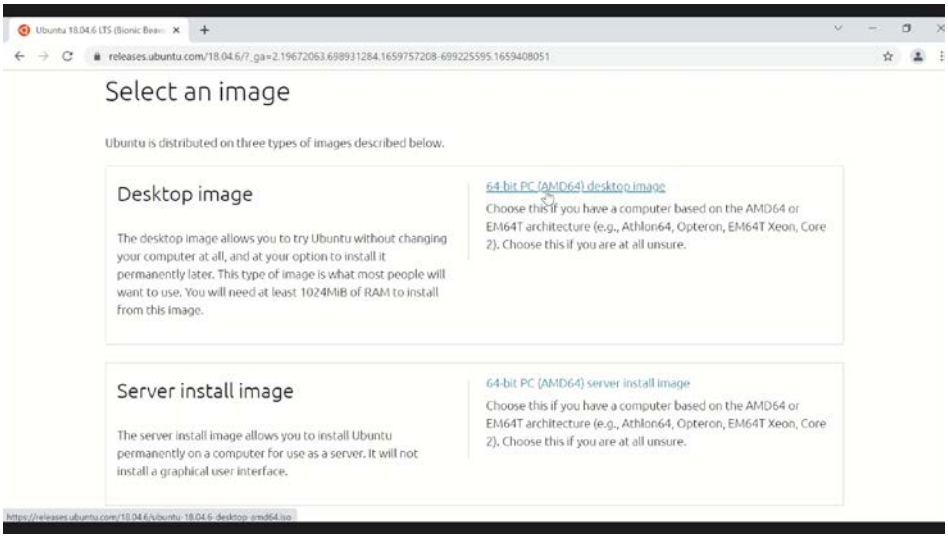
2、 下载 Ubuntu

在 www.ubuntu.com/download 下载 Ubuntu 18.04.LTS





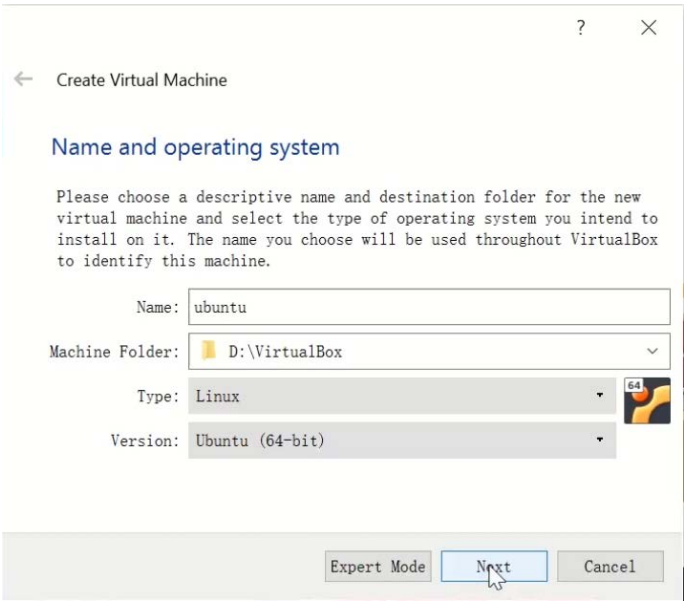

Alternative downloads | Ubuntu
ubuntu.com/download/alternative-downloads
For the full list of available Ubuntu images, we recommend you select a mirror local to you.
See all Ubuntu mirrors
Looking for an older release of Ubuntu? Whether you need a POWER, IBMz (s390x), ARM, an obsolete release or a previous LTS point release with its original stack, you can find them in past releases.
Ubuntu 20.04 LTS (Focal Fossa)
Ubuntu 21.10 (Impish Indri)
Ubuntu 18.04 LTS (Bionic Beaver)
Past releases
Enterprise ready
Canonical delivers the leading Kubernetes distribution.
Charmed Kubernetes ›
Installation guides
If you need some help installing Ubuntu, please check out our step-by-step guides.
Installing Ubuntu Desktop
Installing Ubuntu Server
Helping hands
If you get stuck, help is always at hand.
Ask Ubuntu
Ubuntu Forums
Launchpad Answers


releases.ubuntu.com/18.04.6/?_ga=2.19672063.698931284.1659757208-699225595.1659408051
Select an image
Ubuntu is distributed on three types of images described below.
Desktop image
The desktop image allows you to try Ubuntu without changing your computer at all, and at your option to install it permanently later. This type of image is what most people will want to use. You will need at least 1024MiB of RAM to install from this image.
64-bit PC (AMD64) desktop image
Choose this if you have a computer based on the AMD64 or EM64T architecture (e.g., Athlon64, Opteron, EM64T Xeon, Core 2). Choose this if you are at all unsure.
Server install image
The server install image allows you to install Ubuntu permanently on a computer for use as a server. It will not install a graphical user interface.
64-bit PC (AMD64) server install image
Choose this if you have a computer based on the AMD64 or EM64T architecture (e.g., Athlon64, Opteron, EM64T Xeon, Core 2). Choose this if you are at all unsure.

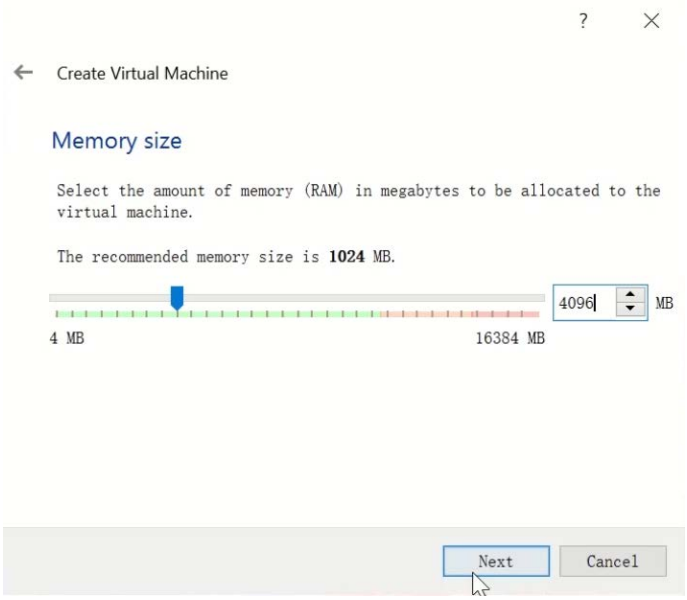
3、 新建虚拟机并安装 Ubuntu 系统

打开 VirtuslBox 并新建虚拟机

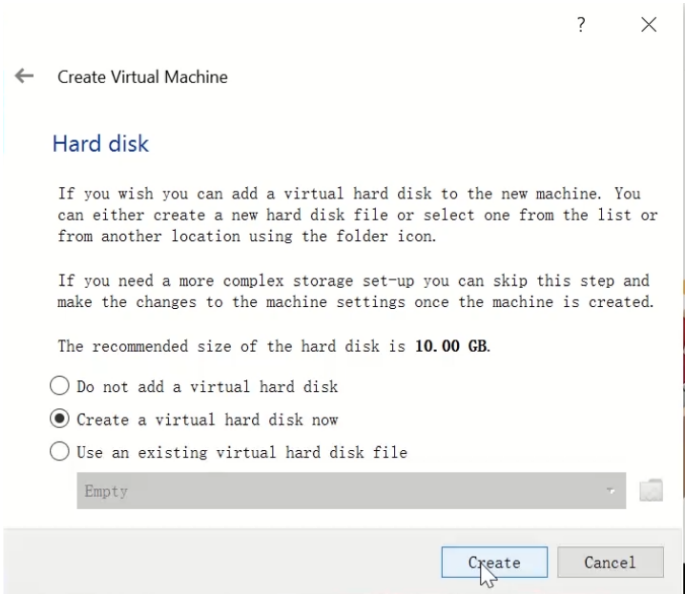
选择工程文件存放位置、输入名称，
类型选择 Linux、版本选择 Ubuntu（64-bit）



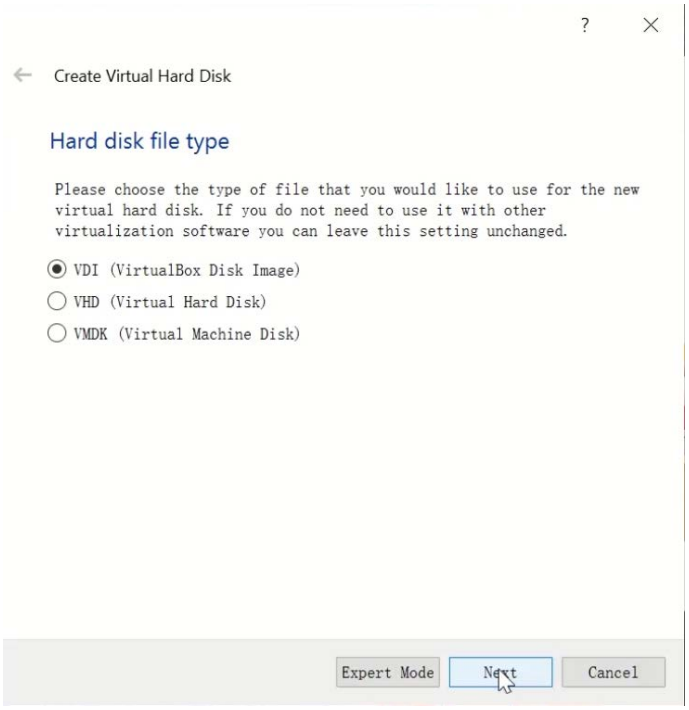
内存大小调整为 4096MB



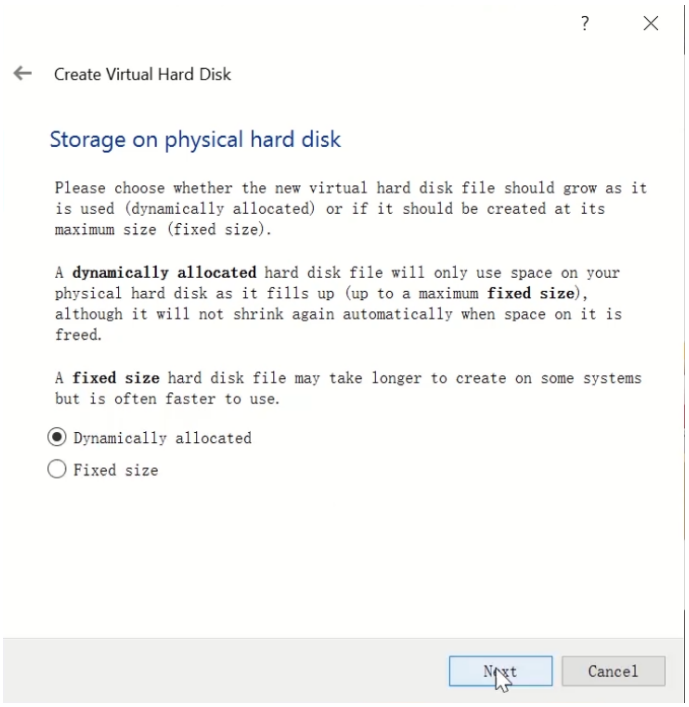
创建虚拟硬盘



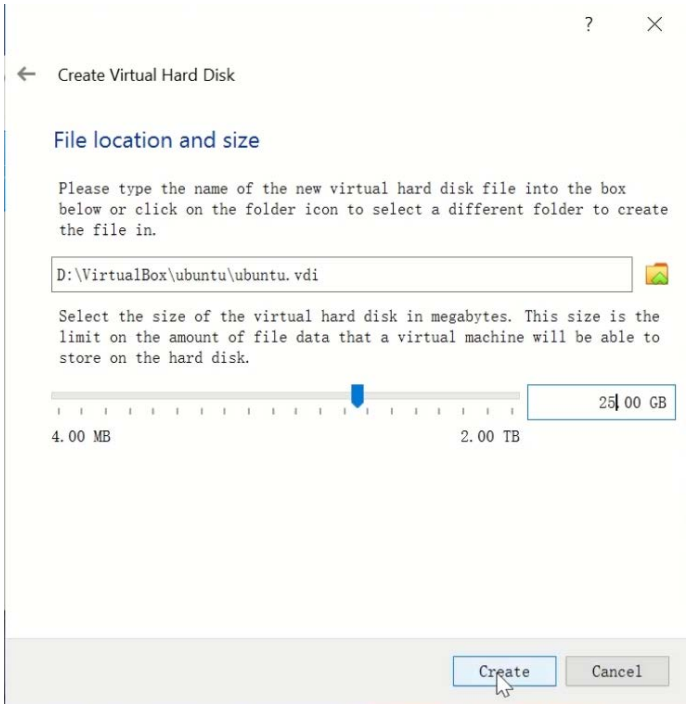
选择 VDI



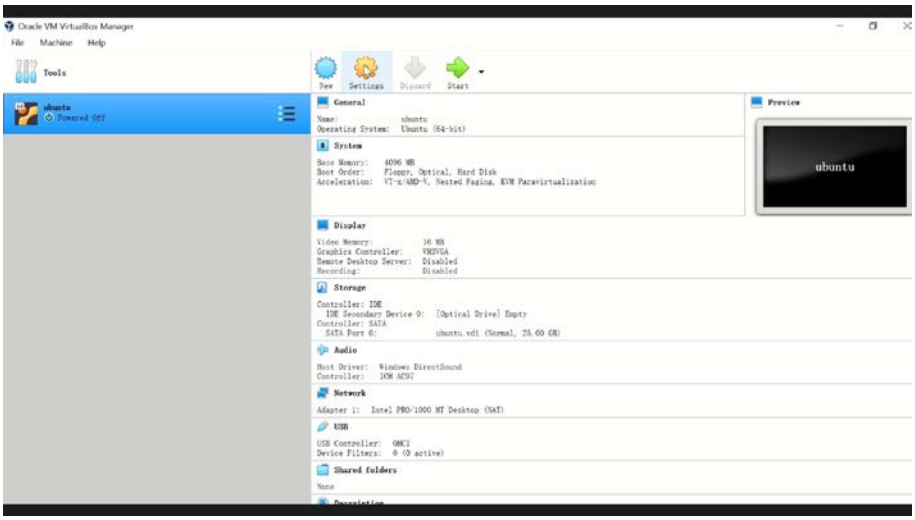
选择动态分配



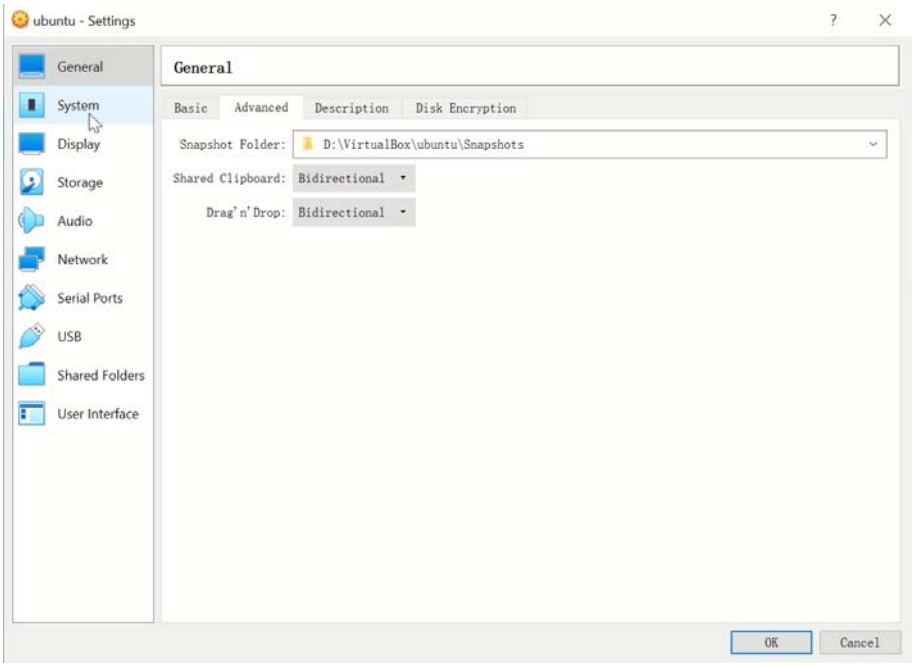
虚拟硬盘大小调整为 25GB



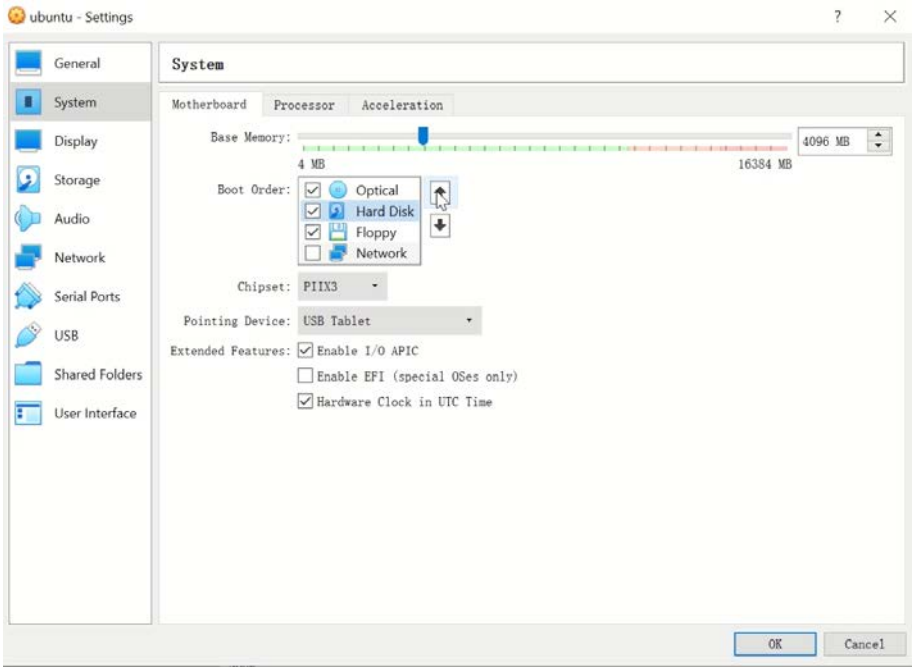
打开设置



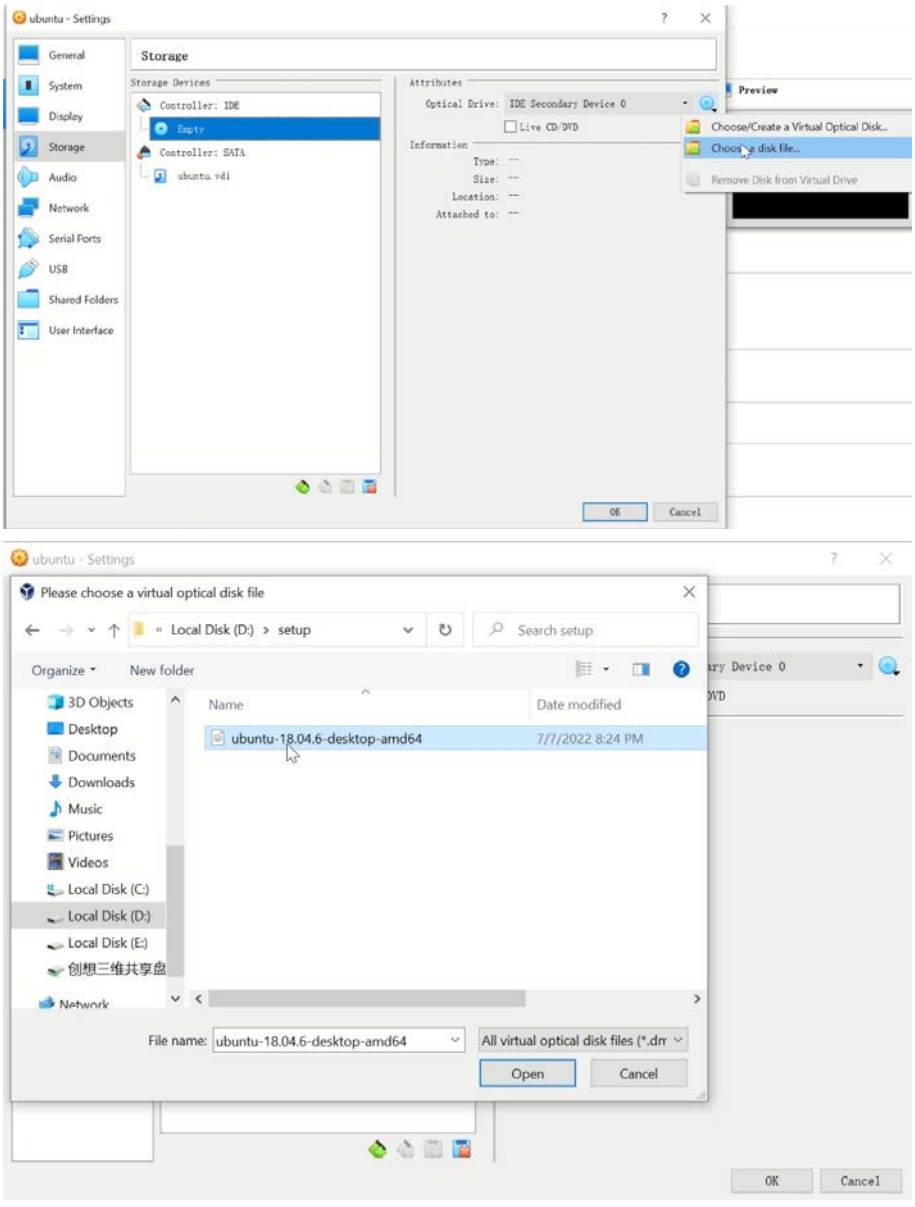
常规设置--高级　将共享粘贴板、拖放改为双向



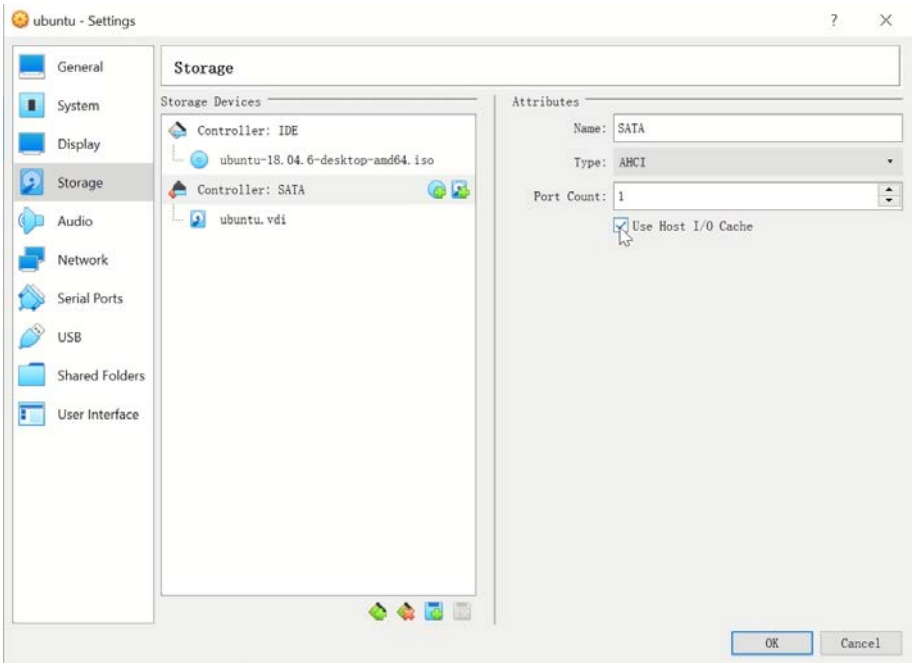
系统设置--调整启动顺序为光驱-硬盘-软驱



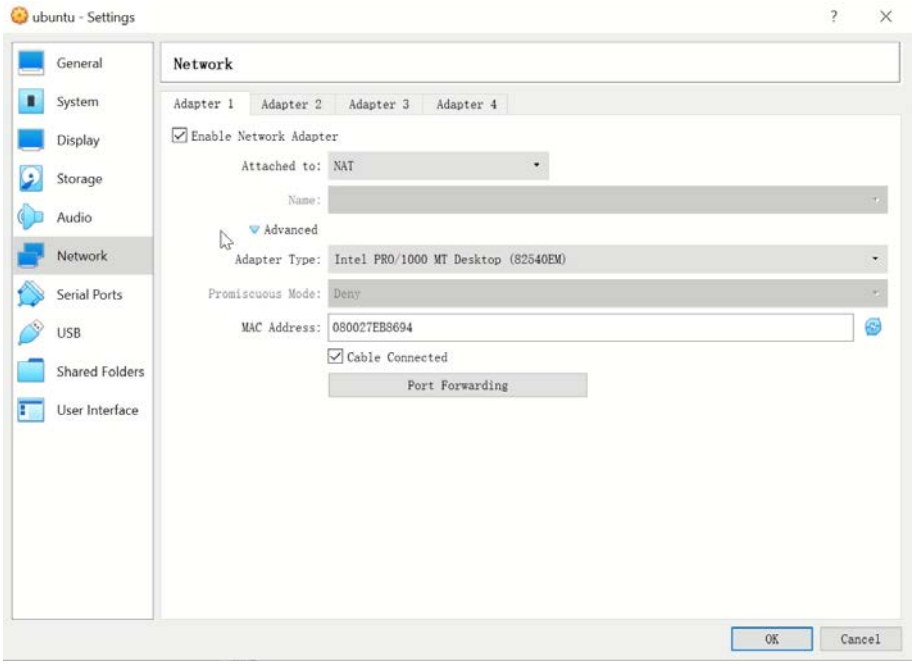
存储设置--IDE--选择下载的 Ubuntu 18.04.6LTS



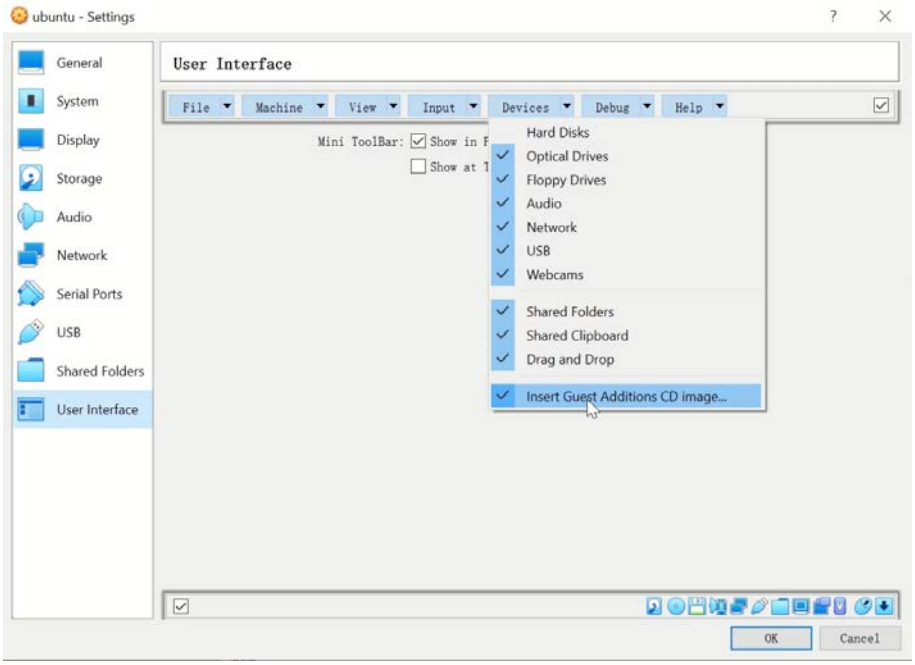
SATA--勾选使用 I/O 口



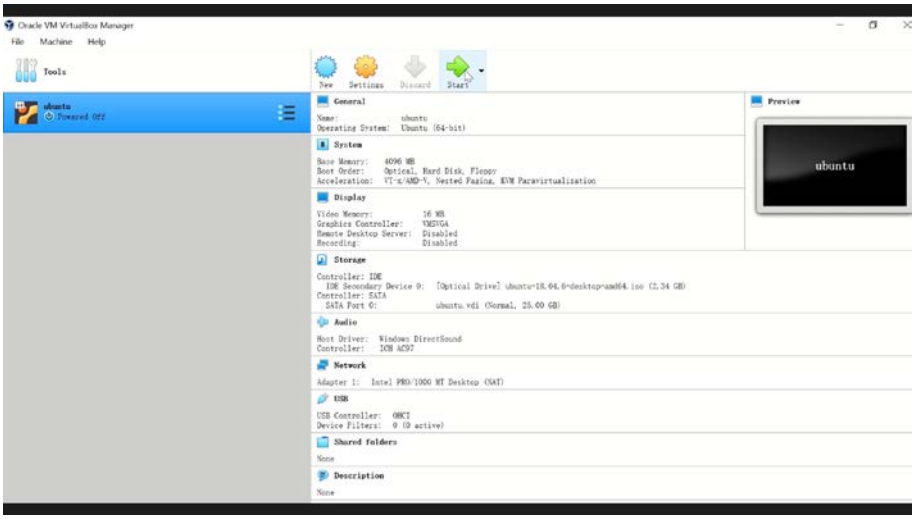
网络设置--高级--确认网络已连接



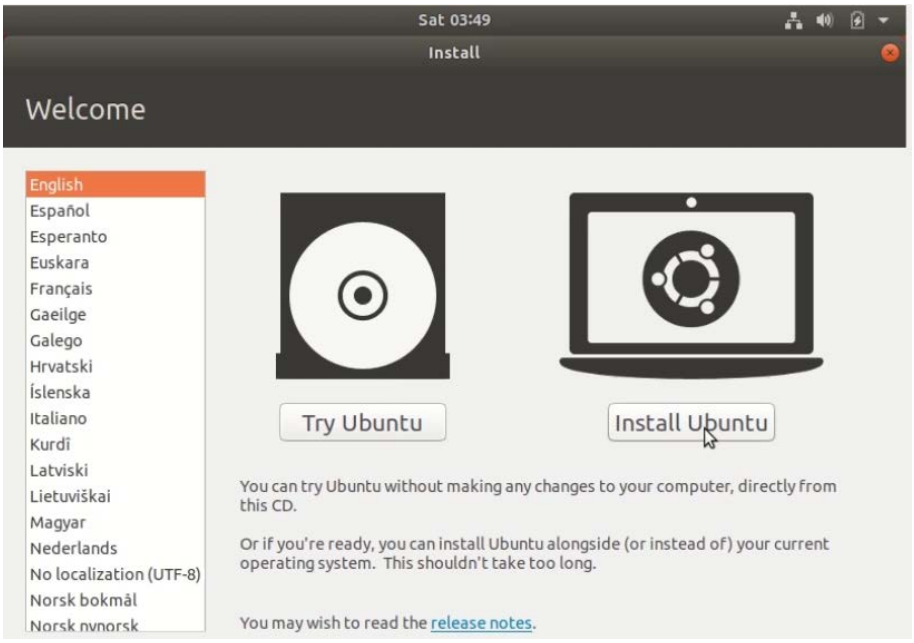
用户界面设置--设备--勾选安装增强功能



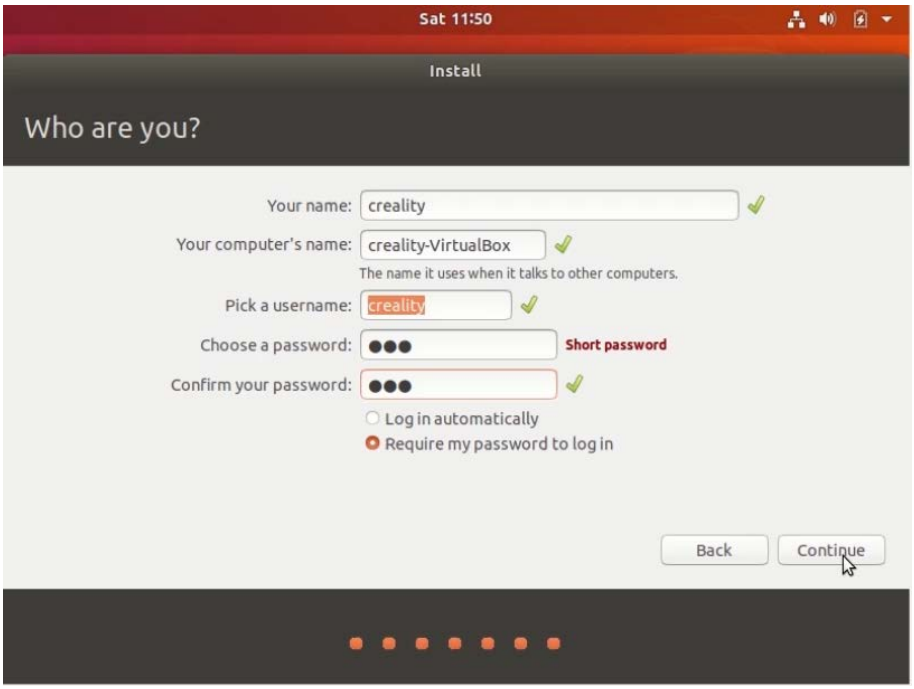
确认后启动虚拟机



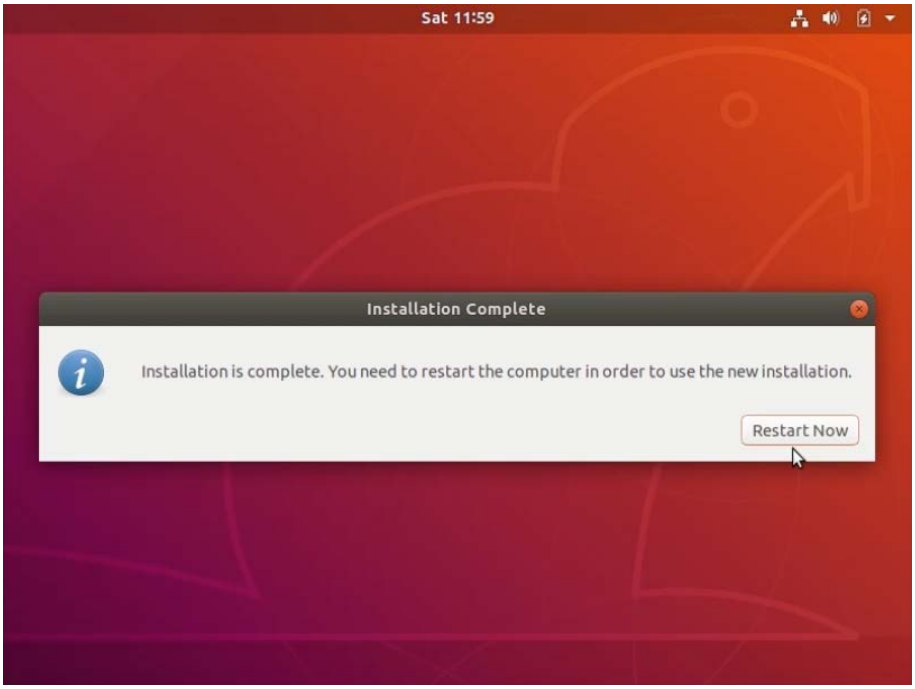
安装 Ubuntu



添加用户名及系统密码



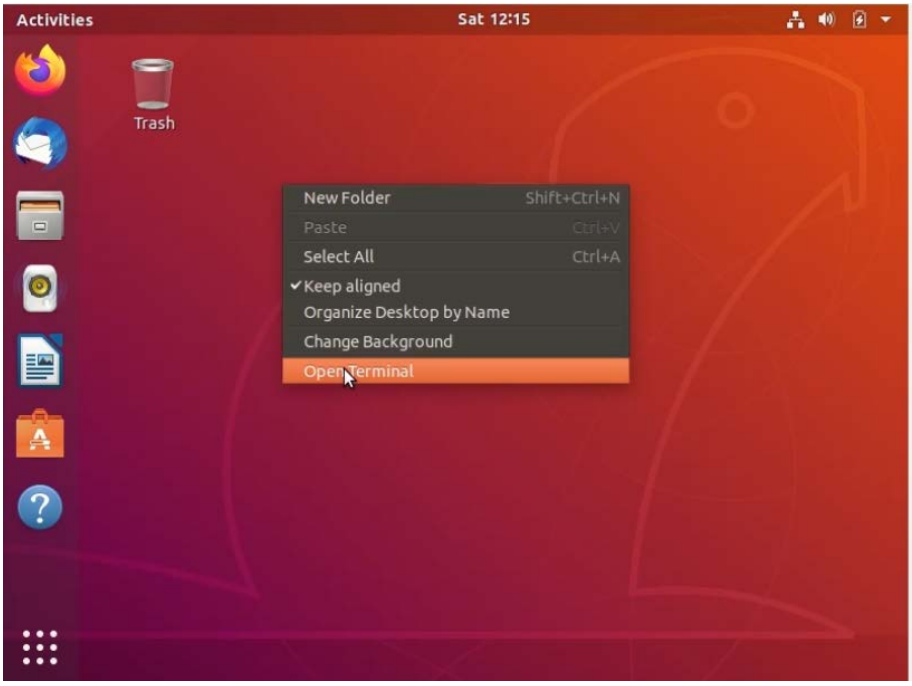
确认后等待重启



4、系统升级及安装 git 环境

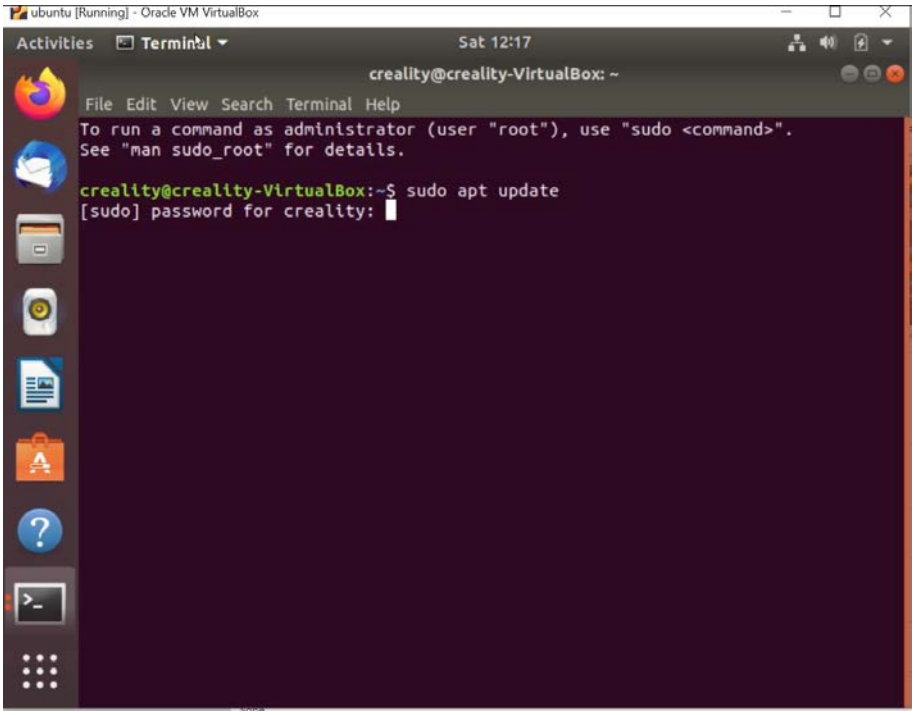
输入刚刚设置的系统密码进入系统

桌面--右键--打开终端

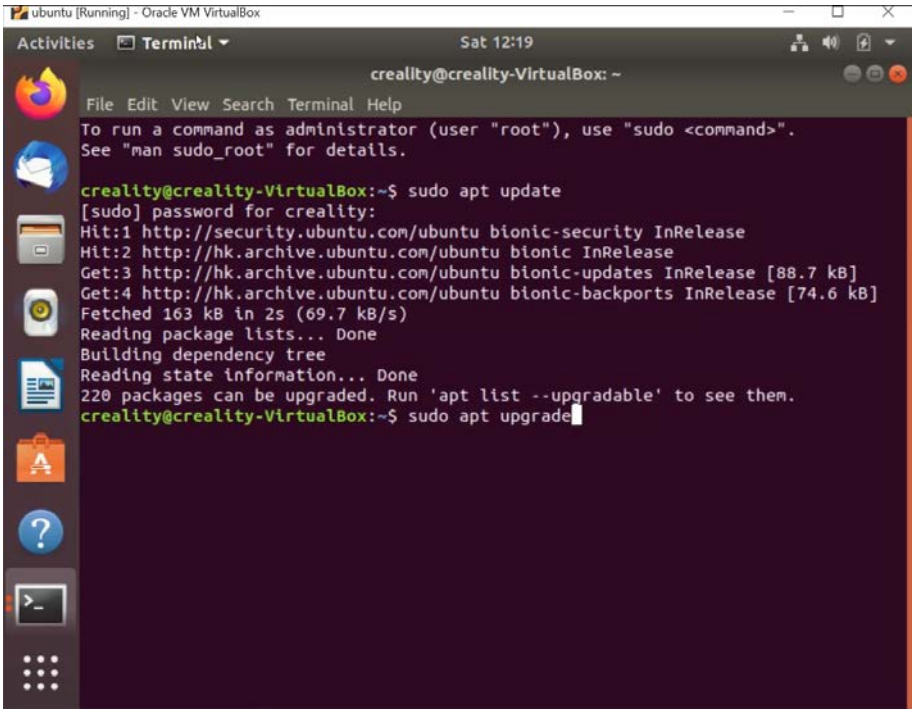


输入“sudo apt update”后回车（列出所有可更新的软件清单）

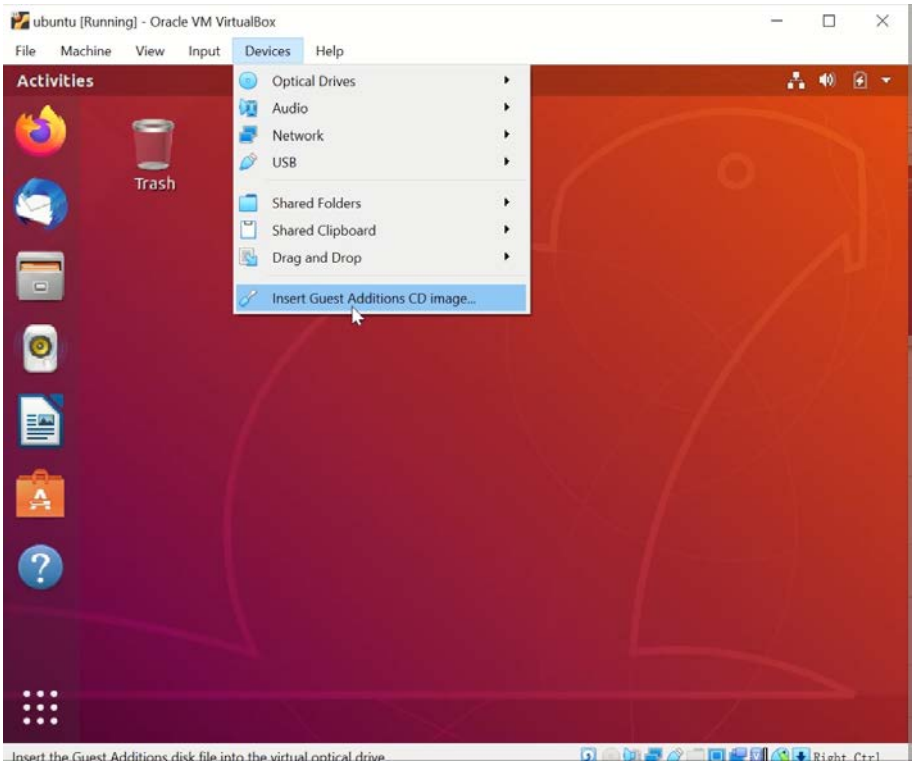
输入系统密码后回车（密码自动隐藏）



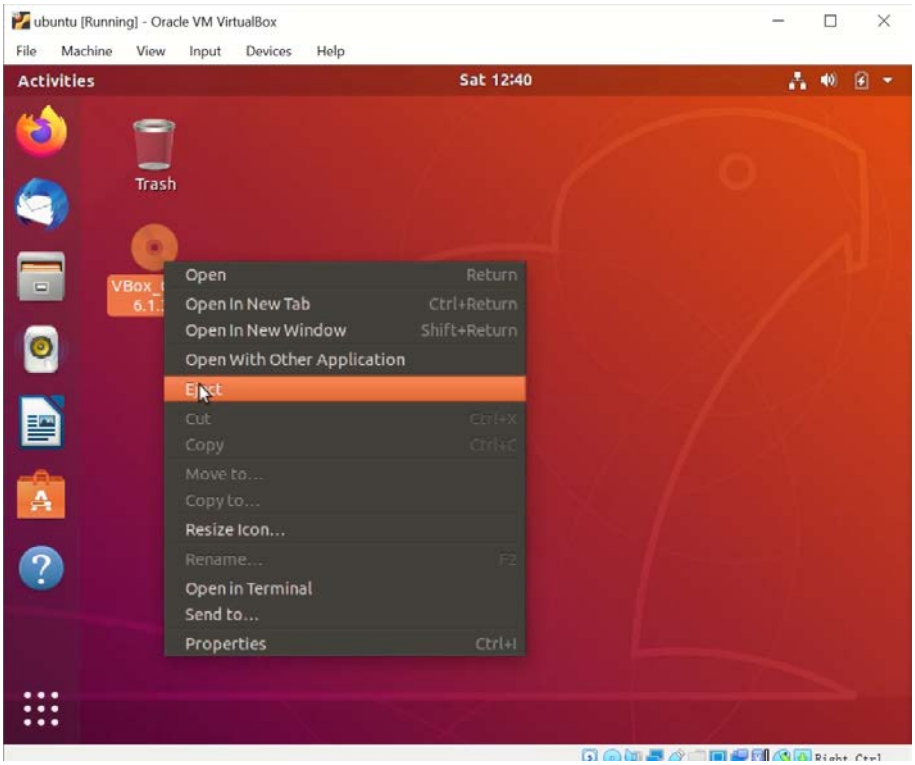
输入“sudo apt upgrade”后回车（升级系统软件包）



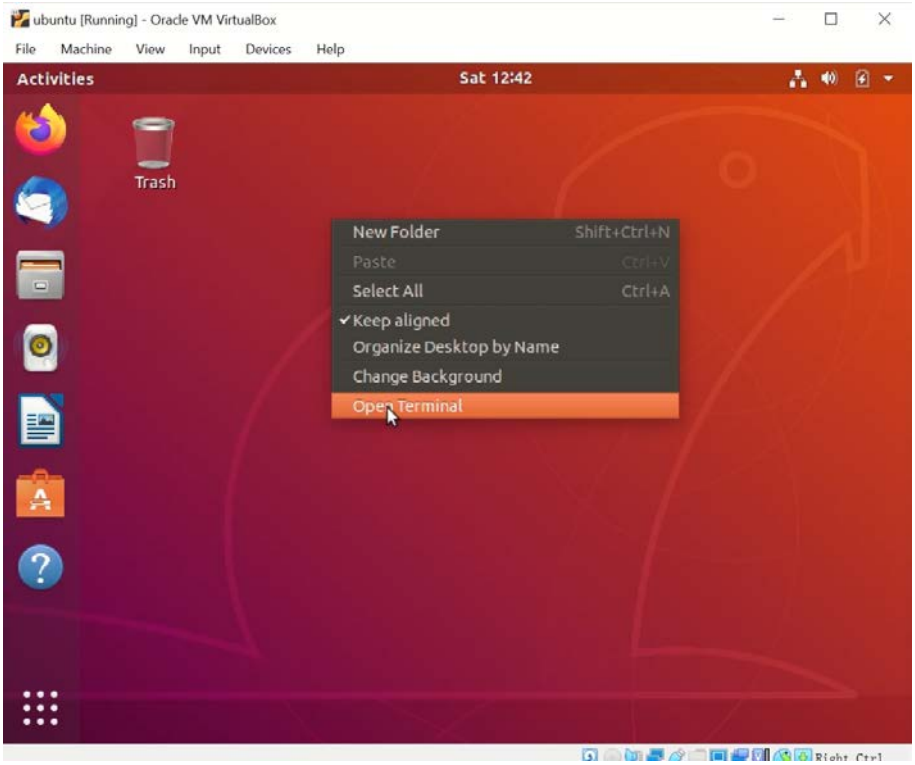
完成后关闭终端窗口，设备--安装增强功能



安装完成后弹出 VBox_Gas

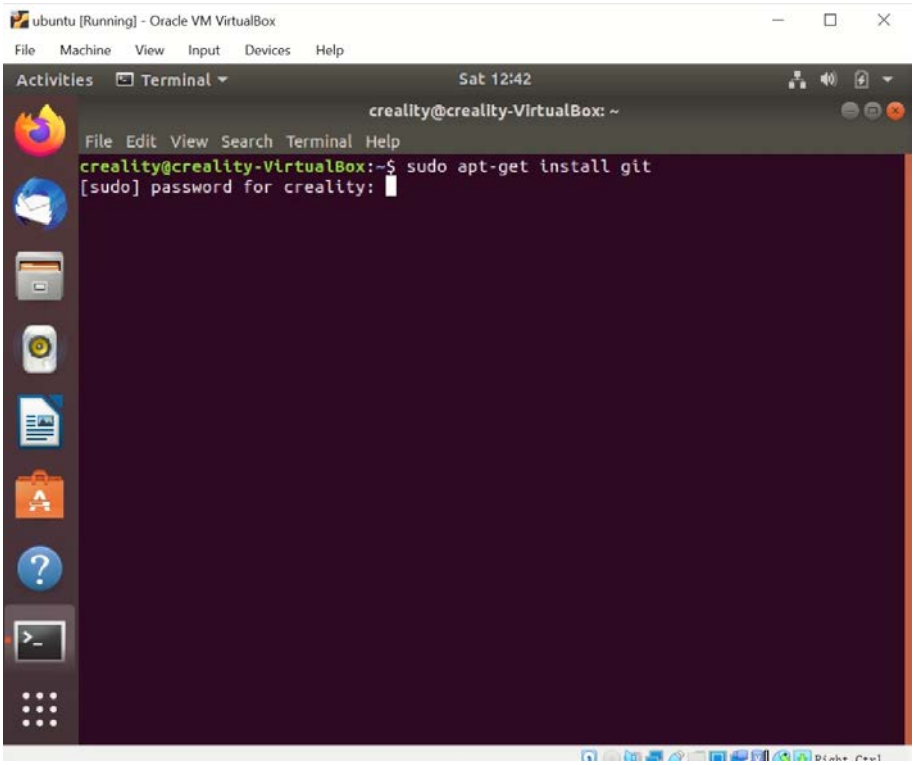


桌面--右键--打开终端

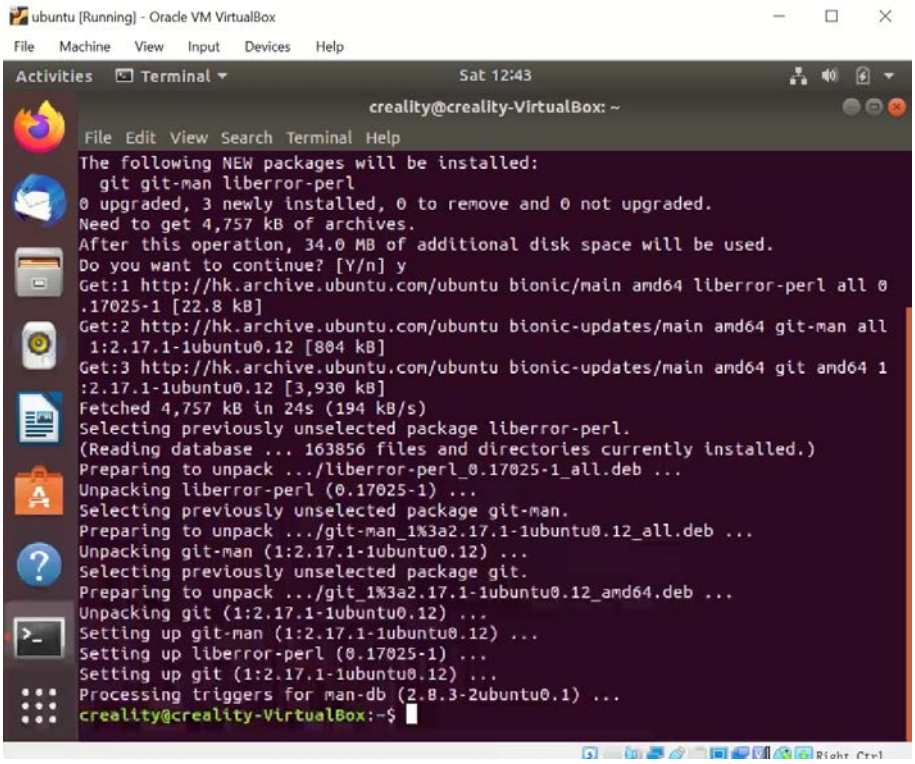


输入“sudo apt-get install git”后回车（安装 git）

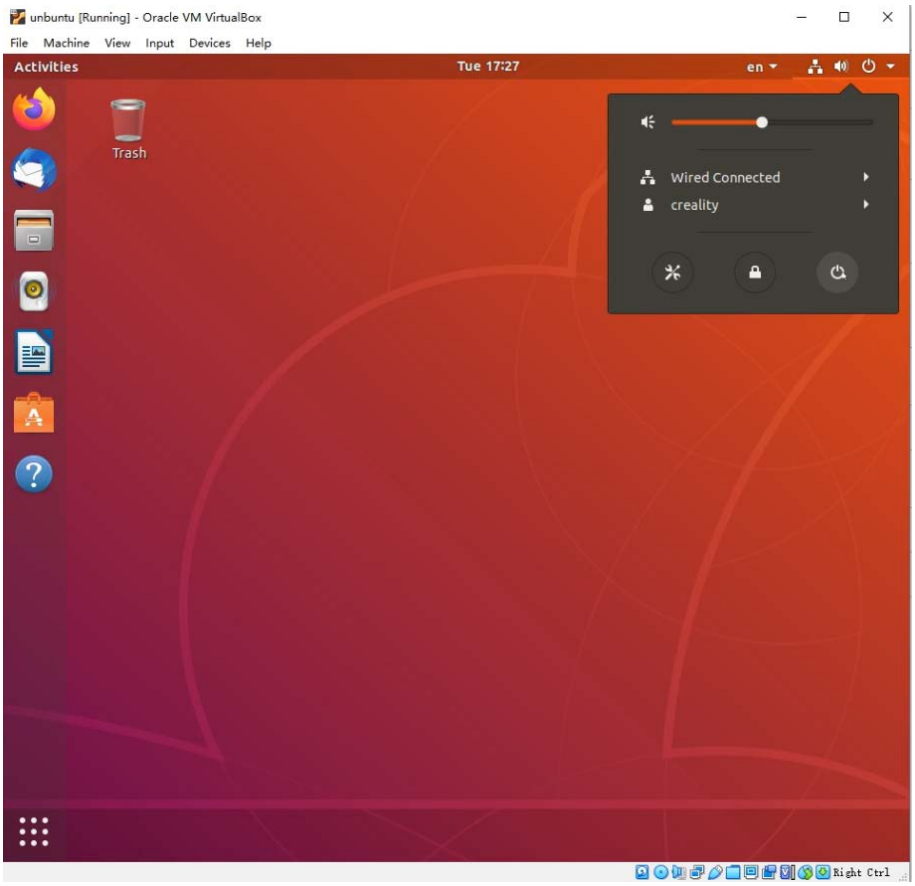
输入系统密码后回车（密码自动隐藏）



安装完成

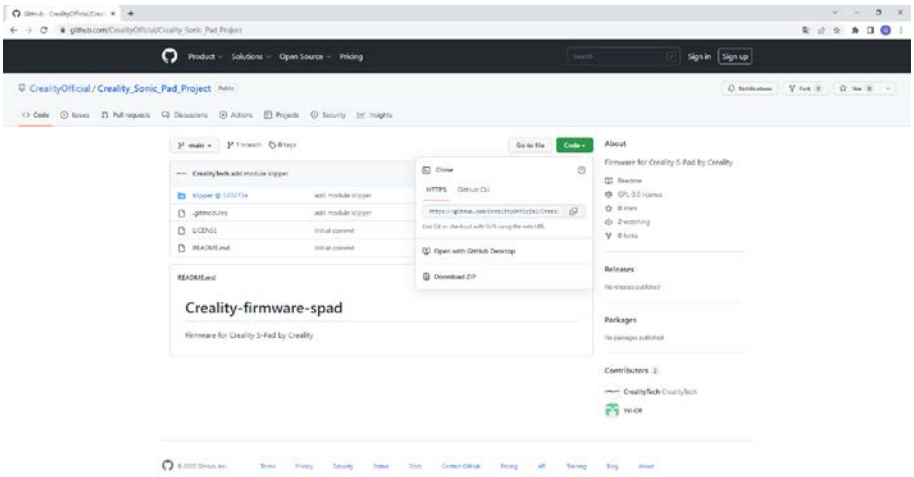


重启系统



5、 下载 Klipper 固件

在 www.github.com/ CrealityOfficial 复制 Klipper 固件地址链接



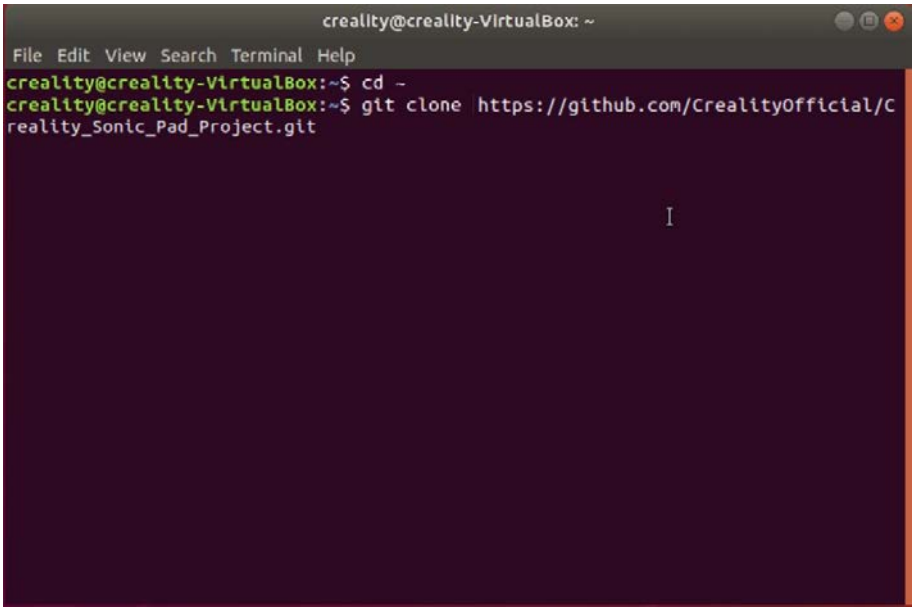
固件地址

https://github.com/CrealityOfficial/Creality_Sonic_Pad_Project.git

桌面--右键--打开终端

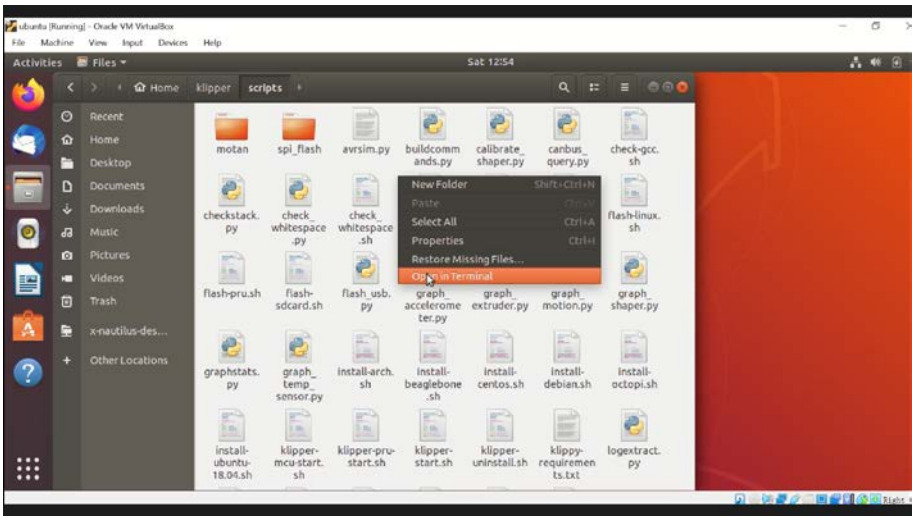
输入“cd ~”后回车（切换工作目录至 home 目录）

输入“git clone”后粘贴 Klipper 固件地址链接--回车



6、 配置打印机固件

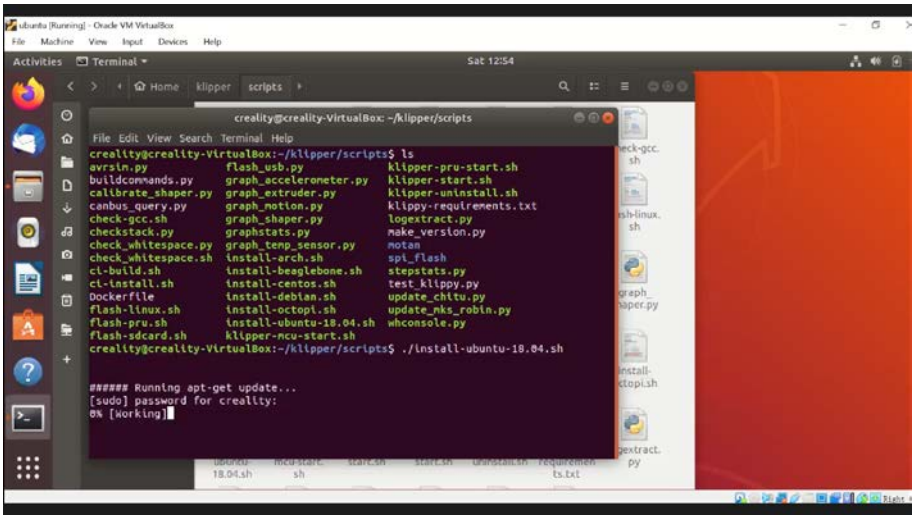
文件管理器--Klipper 文件夹--scripts 文件夹--右键--在终端打开



输入“ls”后回车（确认当前目录下内容与文件夹内一致）

输入“./install-ubuntu-18.04.sh”后回车（安装 ubuntu）

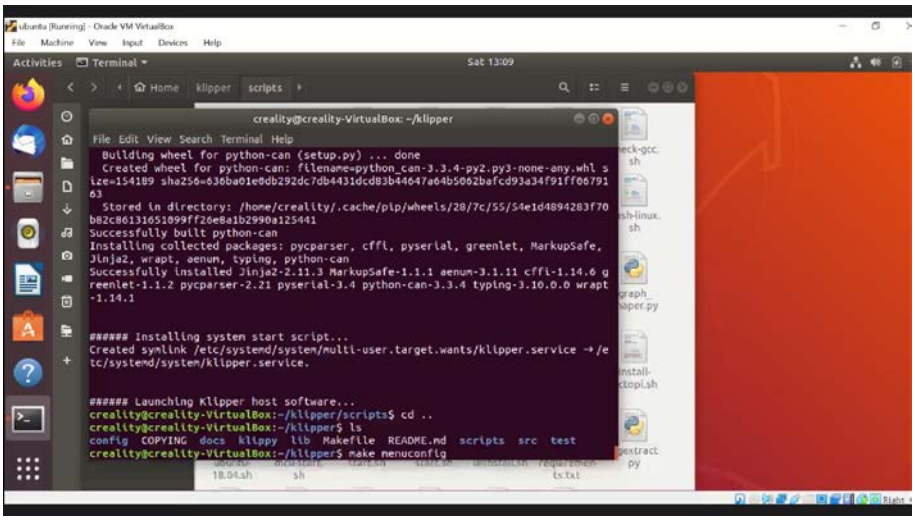
输入系统密码后回车（密码自动隐藏）



输入“cd ..”后回车(切换至上级目录)

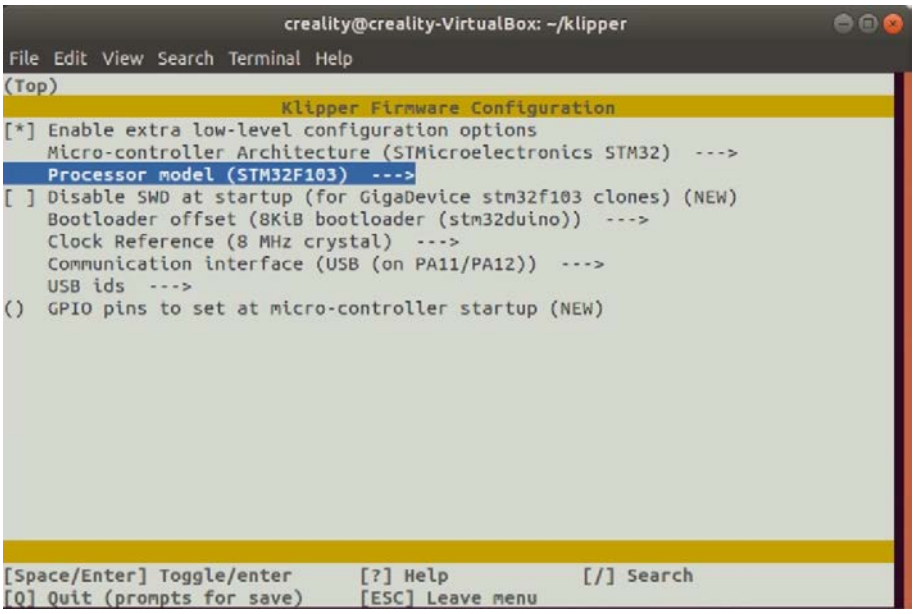
输入“ls”后回车（确认当前目录下内容与文件夹内一致）

输入“make menuconfig”后回车（配置打印机主板）

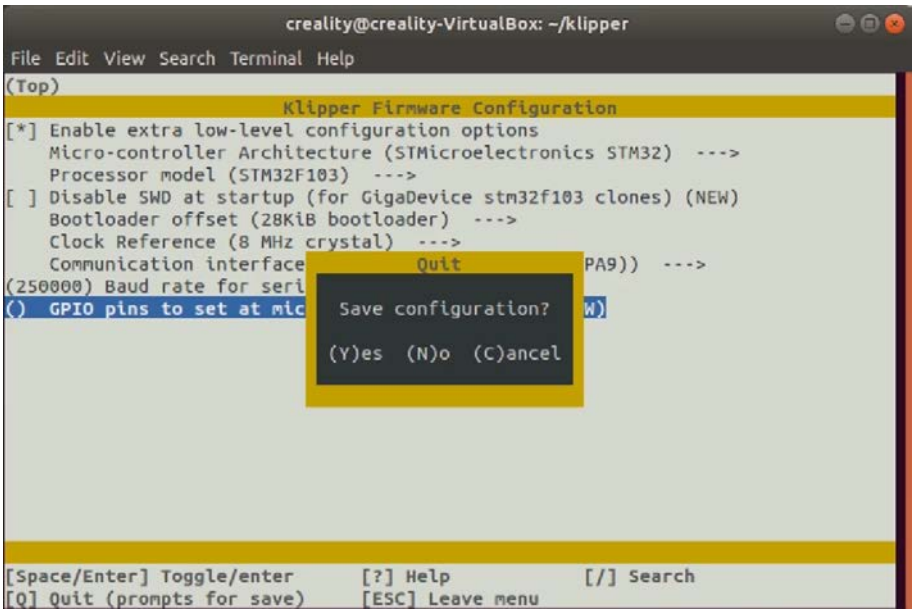


选择芯片结构、芯片型号、Bootloader 偏移、外部时钟、通讯口等参数

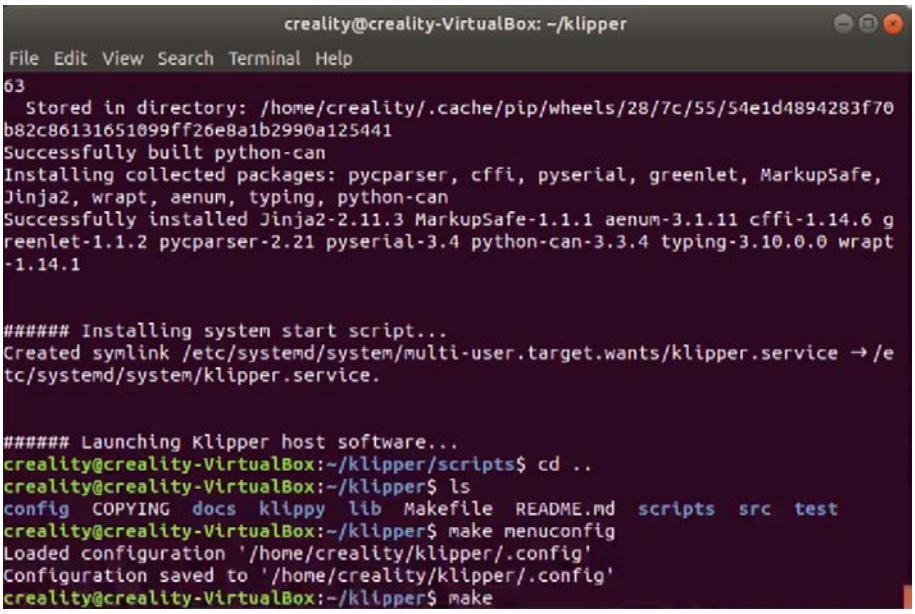
（示例，请按照主板配置）



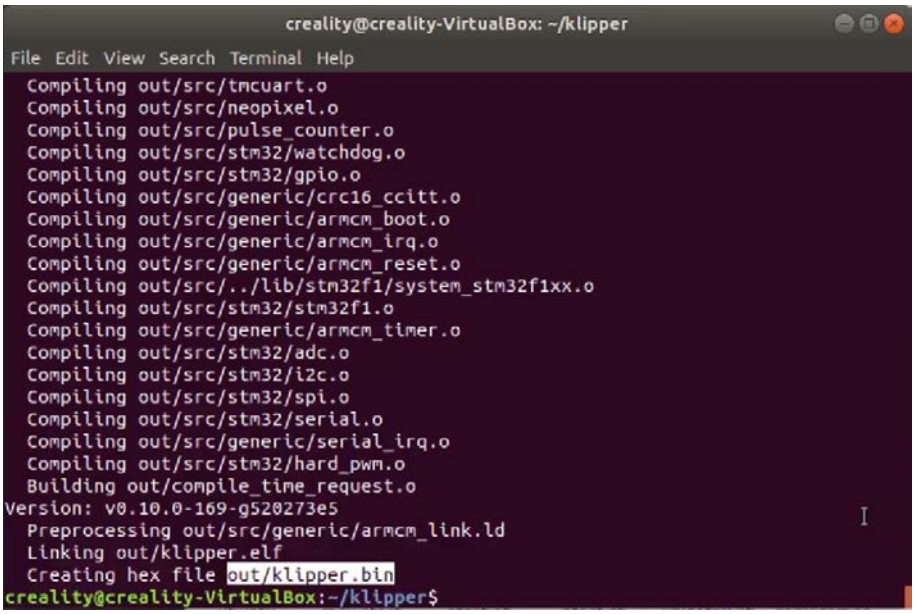
参数配置完成后按“Q”保存，再按“Y”确认



输入“make”后回车（生成烧录文件）

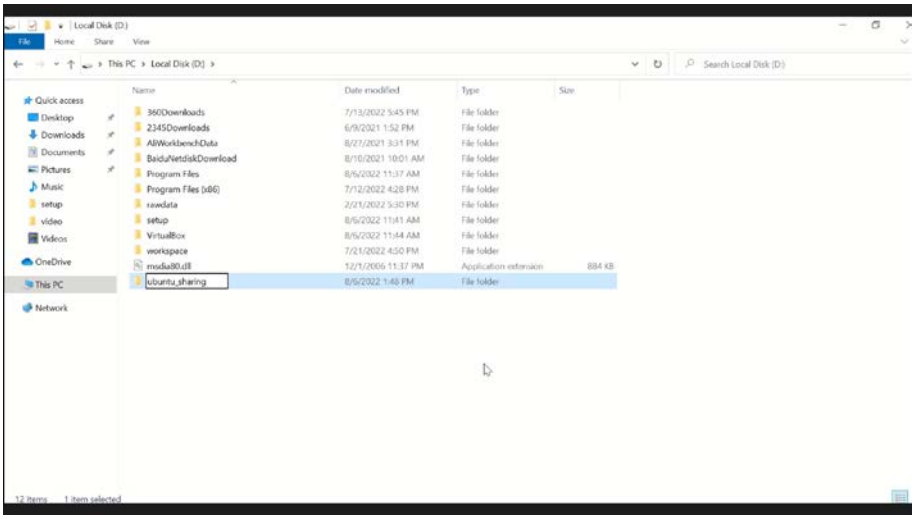


找到固件存放位置



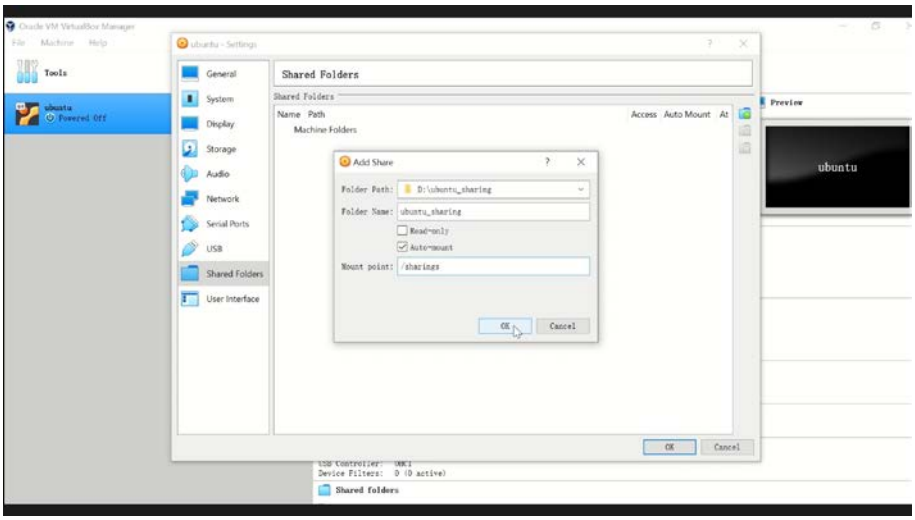
7、通过 SD/TF 卡升级打印机固件

在电脑盘新建“ubuntu_sharing”

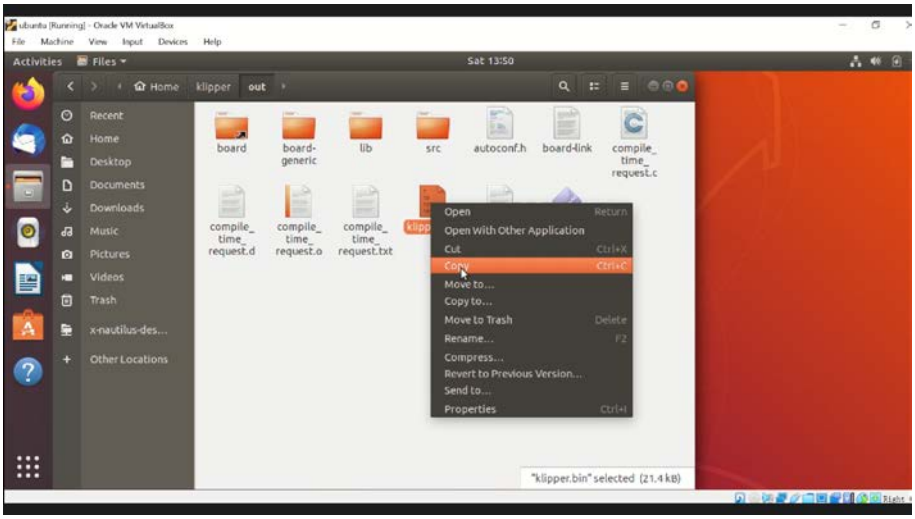


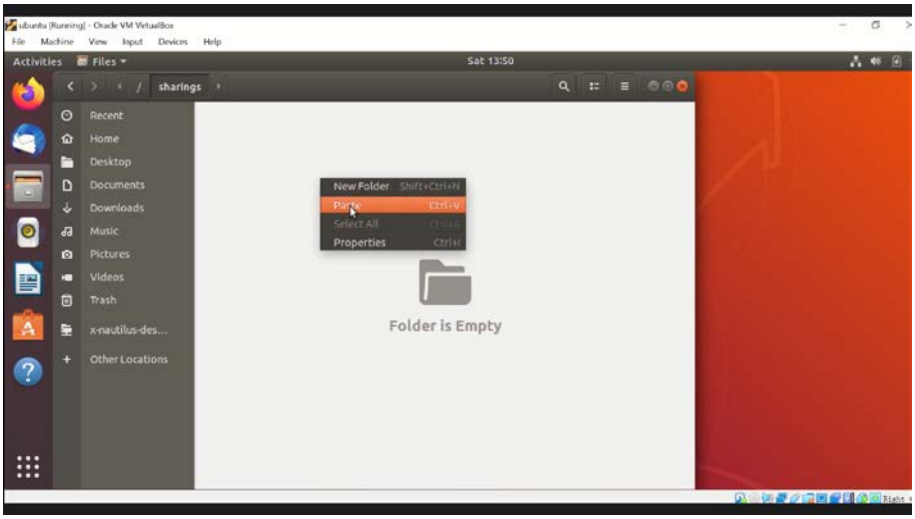
打开 VirtualBox--设置--共享文件夹

添加共享文件夹（勾选自动挂载），挂载点输入“/sharings”

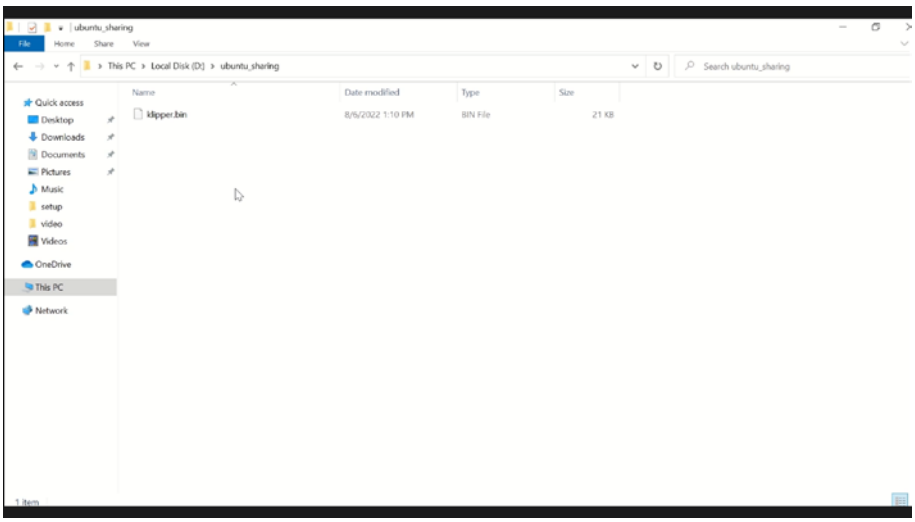


将刚刚生成的 klipper.bin 文件拷贝至 sharings 文件夹





在电脑盘 ubuntu_sharing 文件夹拷贝 klipper.bin 至 TF/SD 卡升级打印机固件



8、 配置 USB 升级打印机固件

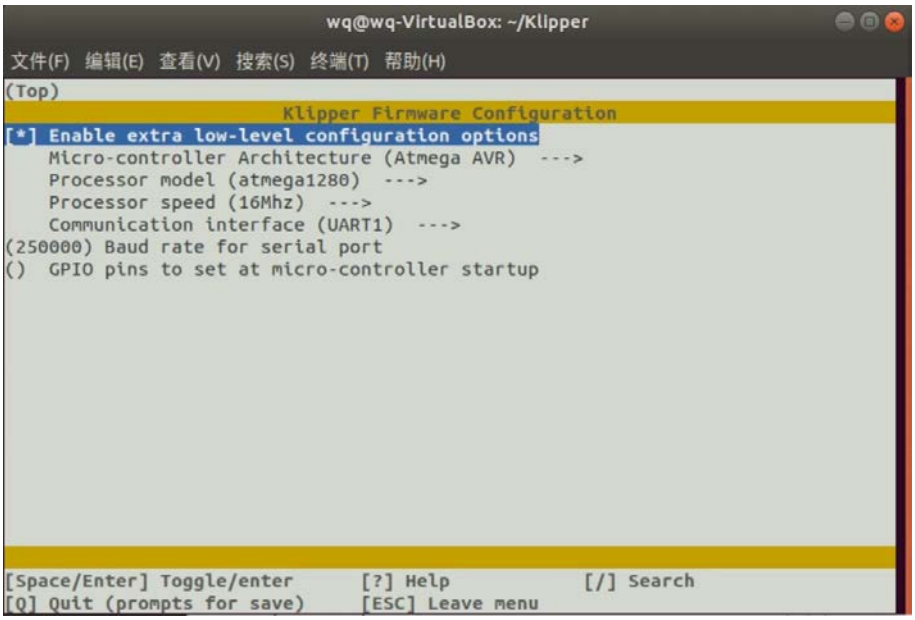
（主板无 Bootloader，不支持 SD 卡升级 ）

请先用 USB 数据线将打印机与虚拟机所在的电脑连接，

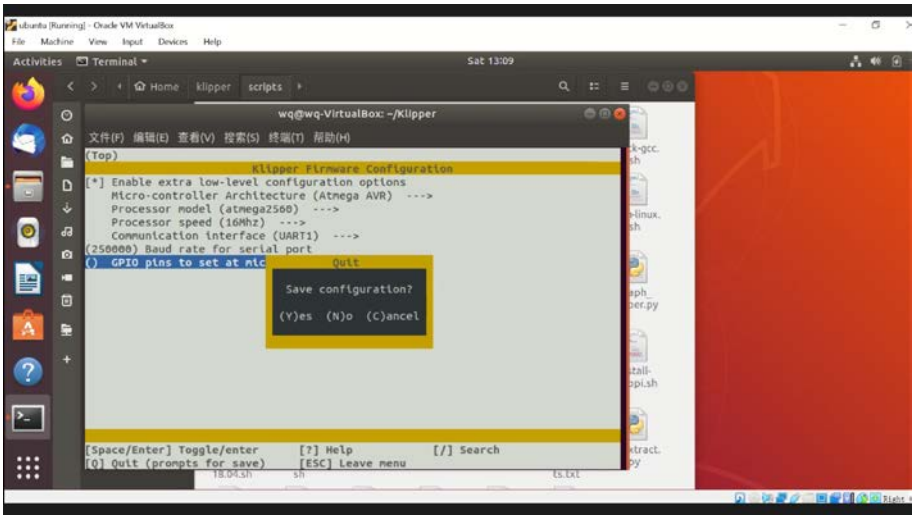
升级固件过程中请保持连接

参考前面教程进入配置主板界面（示例，请按照主板配置）

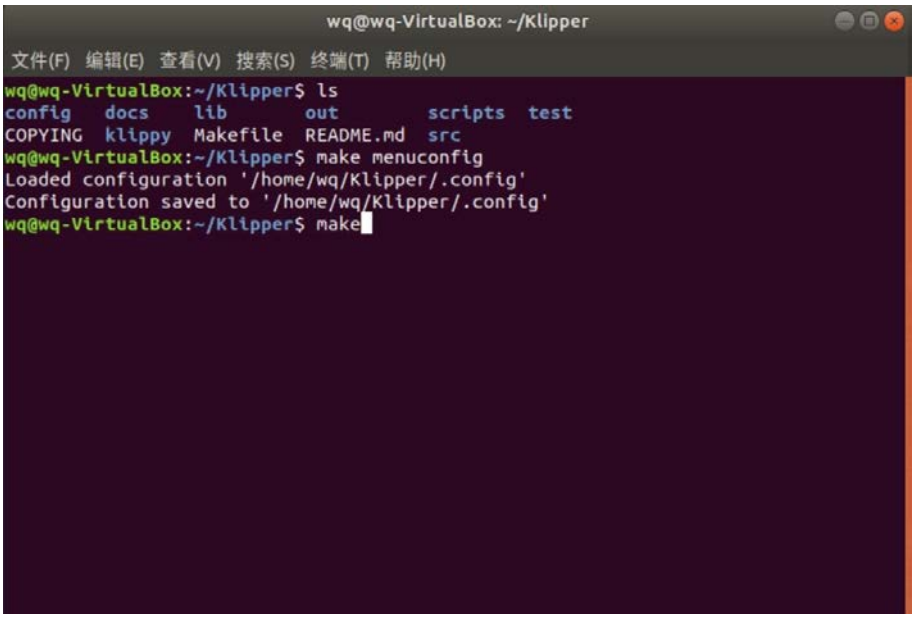
选择芯片结构、芯片型号、Bootloader 偏移、外部时钟、通讯口等参数



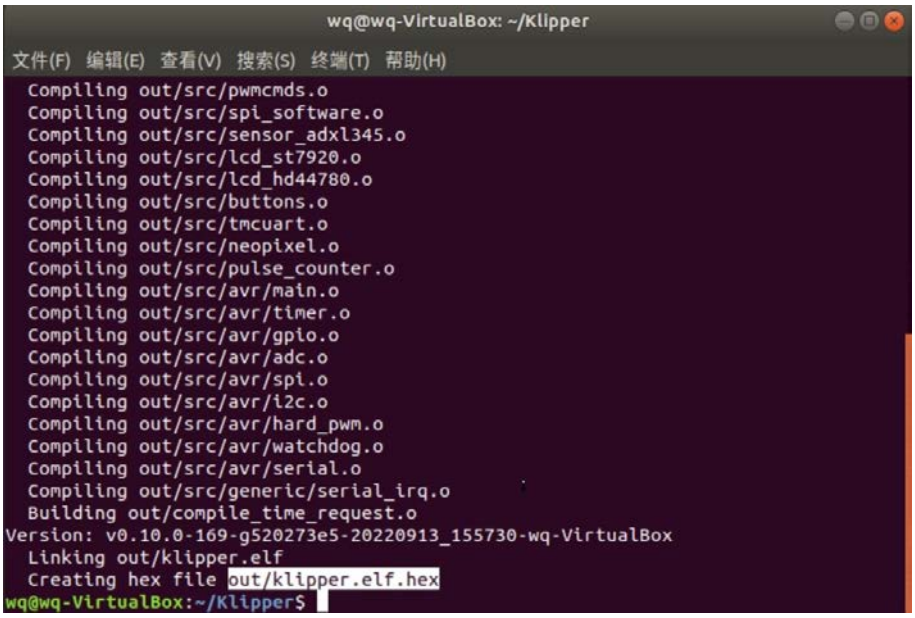
参数配置完成后按“Q”保存，再按“Y”确认



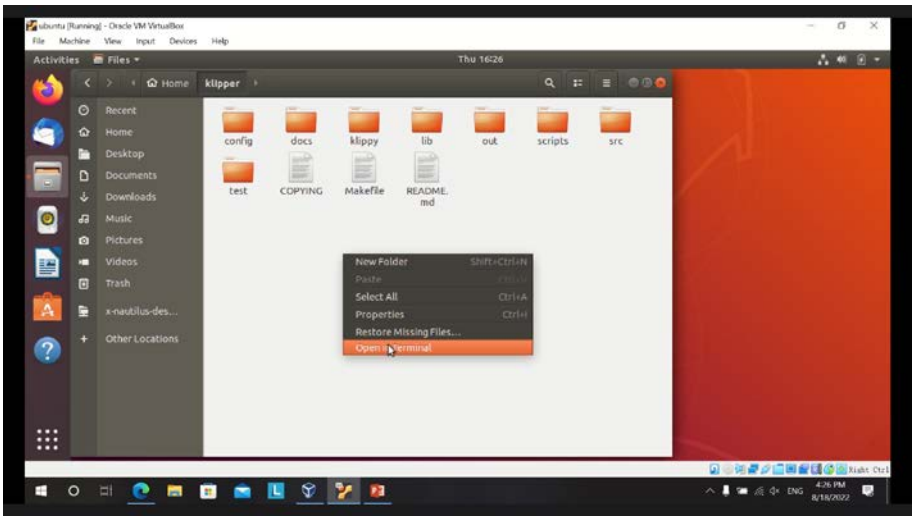
输入“make”后回车（生成烧录文件）



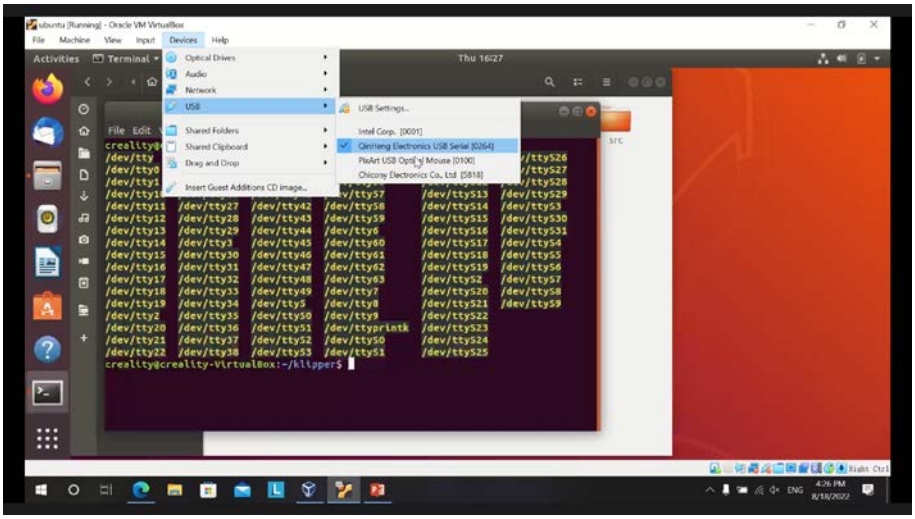
找到固件存放位置



文件管理器--Klipper 文件夹--右键--在终端打开



设备--USB--勾选与打印机连接的 USB 选项

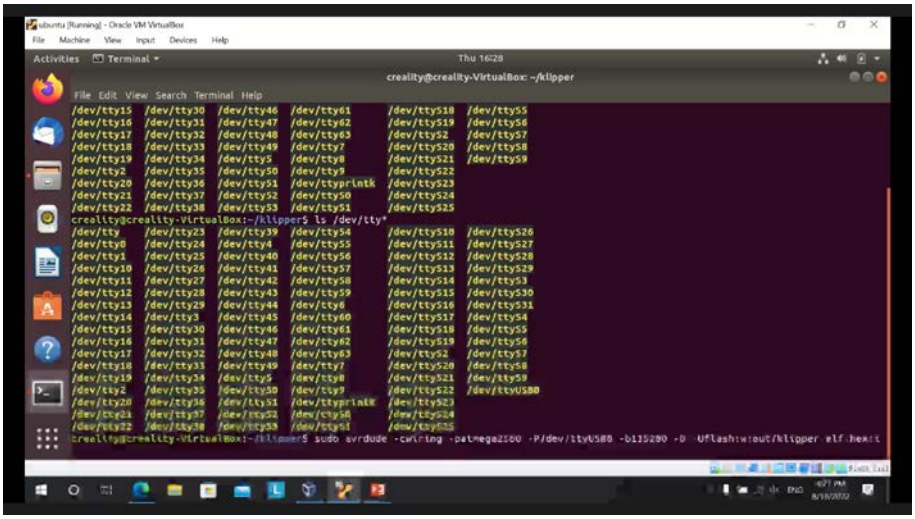


输入“ls /dev/tty*”后回车（确认目录内出现/dev/ttyUSB0）

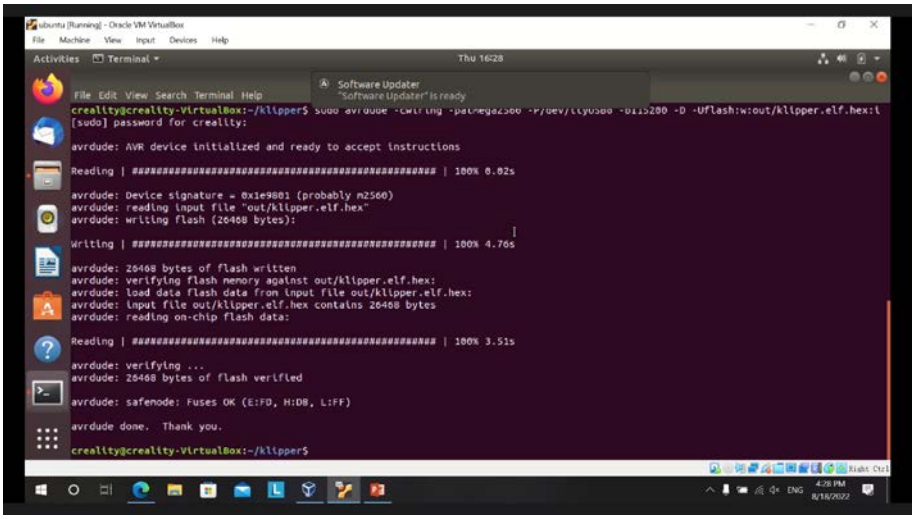
输入

“sudo avrdude -cwiring -patmega2560 -P/dev/ttyUSB0 -b115200 -D -Uflash:w:out/klipper.elf.hex:i”

后回车（将 klipper 固件传输到打印机进行升级，注意命令中“-”前有空格）



升级完成


ubuntu [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities
Terminal
Thu 16:28
Software Updater
"Software Updater" is ready
File Edit View Search Terminal Help
creality@creality-VirtualBox:~/klipper$ sudo avrdude -cwiring -patmega2560 -P/dev/ttyUSB0 -b115200 -D -Uflash:w:out/klipper.elf.hex:i
[sudo] password for creality:
avrdude: AVR device initialized and ready to accept instructions
Reading | ## | 100% 0.02s
avrdude: Device signature = 0x1e9801 (probably m2560)
avrdude: reading input file "out/klipper.elf.hex"
avrdude: writing flash (26468 bytes):
Writing | ## | 100% 4.76s
avrdude: 26468 bytes of flash written
avrdude: verifying flash memory against out/klipper.elf.hex:
avrdude: load data flash data from input file out/klipper.elf.hex:
avrdude: input file out/klipper.elf.hex contains 26468 bytes
avrdude: reading on-chip flash data:
Reading | ## | 100% 3.51s
avrdude: verifying ...
avrdude: 26468 bytes of flash verified
avrdude: safemode: Fuses OK (E:FD, H:D8, L:FF)
avrdude done. Thank you.
creality@creality-VirtualBox:~/klipper$
Right Ctrl
ENG
4:28 PM
8/18/2022