

Instructions for students on Windows, Linux, or Mac (except M1 chip)



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- A. VMware install
- B. Ubuntu 20.04 LTS Download
- C. Creating a new VM

A. VMware Install (everyone except students with M1 chip)



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You should have received an email with instructions, follow them to the psu software website and install VMware with your license.

The first email was sent by Antony Vallalla followed by a second email from noreply@kivuto.com (subject = "An account has been created for you").

If you didn't receive an email with instructions, use the trial:

1. Go to VMware website.
2. In the website search bar, search for "vmware fusion" (if using Mac) or "vmware workstation pro" (if using Windows/Linux).
3. Follow through the link "Fusion Download" (Mac) or "Download Workstation" (Windows) to get to the trial download.
4. If necessary, make a vmware account. Does not have to be associated with your psu email.
5. Download and install the VMware software.
6. Once you receive the email with the instructions for accessing psu software, get your license and then register your VMware client. *If you did not receive the email, please ask kindly Anthony Vallalla to create an account for you.*

B. Ubuntu 20.04 LTS Download

(everyone except
students with M1 chip)



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1. Go to the Ubuntu website (<https://ubuntu.com/>).
2. Click the Download tab, and under Ubuntu Desktop click 20.04 LTS.
3. (Optional) Verify the checksum.

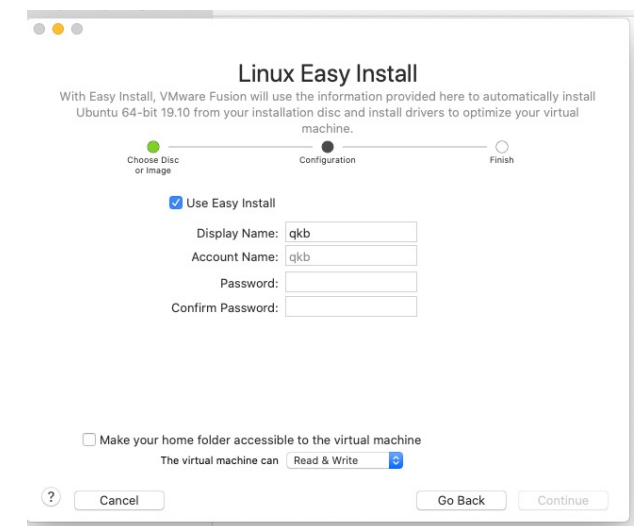
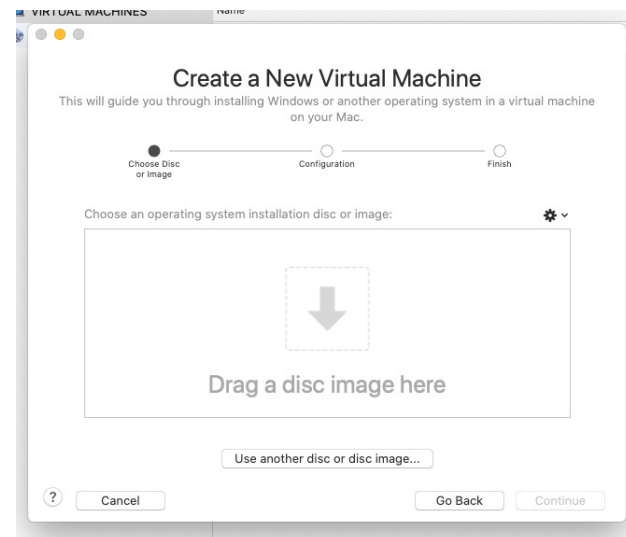
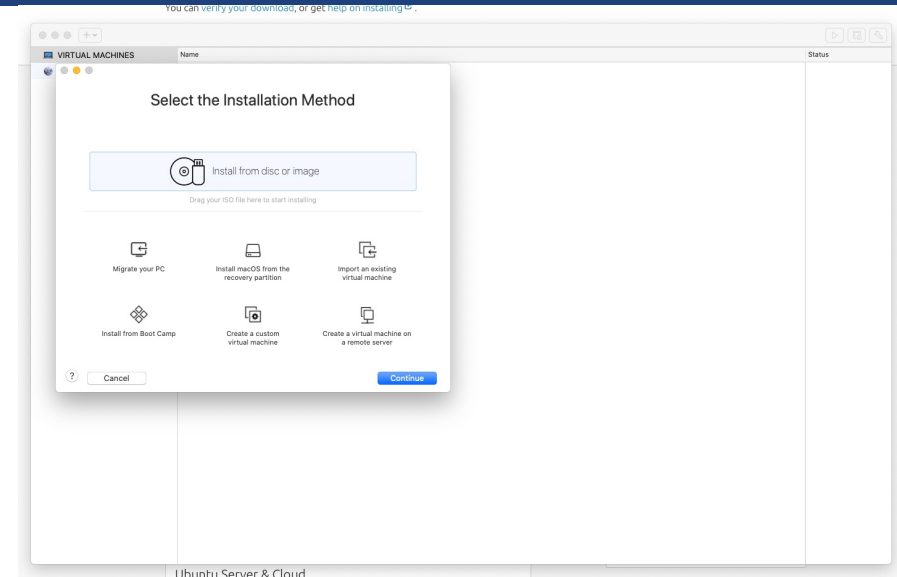
C. Creating a new VM (everyone except students with M1 chip)



1. Click the '+' button then click 'New'.
2. Select 'Install from disc or image' for quick VM install.
3. Drag/browse for the Ubuntu iso file and click Continue.
4. Enter a user account and password for the VM.
5. (Optional) Check the box at the bottom to enable the VM to access folders in your Windows/Mac system.
6. Select Finish and power on the VM.

Other:

- Install VMware Tools for copy/paste and other functionality from host system to VM.
- Can customize VM settings (such as RAM or hard disk size) by first powering it off, then right clicking on it and selecting 'Settings'.





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Instructions for students on Mac with M1 chip

- A. UTM install
- B. Ubuntu Server 20.04 for ARM
- C. Creating a new VM

A. UTM Install (Mac with M1 chip)

1. No license key needed (discard the email with the instructions about VMware)
2. Download UTM for free from the official website <https://mac.getutm.app/>
3. Install UTM



B. Ubuntu Server 20.04 for ARM (Mac with M1 chip)



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Download Ubuntu 20.04.02 LTS from <https://ubuntu.com/download/server/arm>

The screenshot shows the Ubuntu website's navigation bar with links for Enterprise, Developer, Community, and Download. The 'Downloads' section is active, showing a breadcrumb trail: Downloads > Server > ARM > POWER > s390x > Provisioning. The main heading is 'Ubuntu Server for ARM'. Below it, a paragraph states: 'Ubuntu 20.04.2 LTS includes support for the very latest ARM-based server systems powered by certified 64-bit processors.' Another paragraph mentions: 'Develop and test using over 50,000 software packages and runtimes — including Go, Java, Javascript, PHP, Python and Ruby — and deploy at scale using our complete scale-out management suite including MAAS and Juju. Ubuntu delivers server-grade performance on ARM, while fully retaining the reliable and familiar Ubuntu experience.' To the right of the text is the 'arm' logo in blue. At the bottom, a white box contains the text 'Ubuntu Server' and 'This is the iso image of the Ubuntu Server installer.' It features two buttons: a green 'Download Ubuntu 20.04.2 LTS' button and a white 'Download Ubuntu 21.04' button. A link for 'Alternative and previous releases' is also present.

ubuntu® Enterprise ▾ Developer ▾ Community ▾ Download ▾ Search 🔍 Sign in

Downloads Server > ARM POWER s390x Provisioning

Ubuntu Server for ARM

Ubuntu 20.04.2 LTS includes support for the very latest ARM-based server systems powered by certified 64-bit processors.

Develop and test using over 50,000 software packages and runtimes — including Go, Java, Javascript, PHP, Python and Ruby — and deploy at scale using our complete scale-out management suite including MAAS and Juju. Ubuntu delivers server-grade performance on ARM, while fully retaining the reliable and familiar Ubuntu experience.

arm

Ubuntu Server

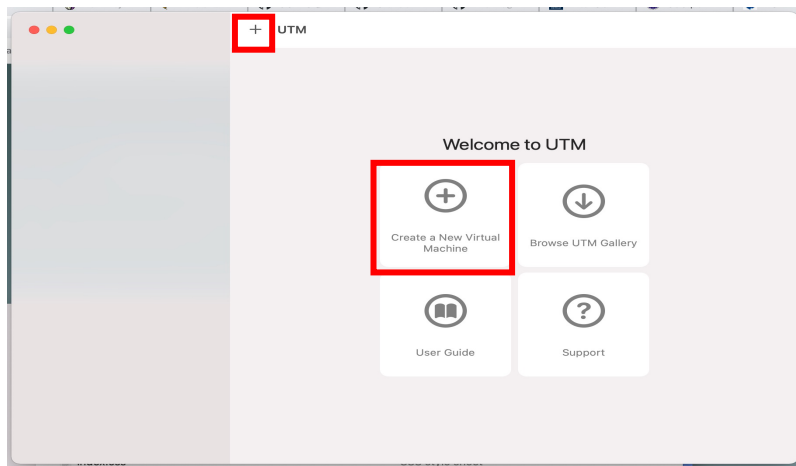
This is the iso image of the Ubuntu Server installer.

Download Ubuntu 20.04.2 LTS

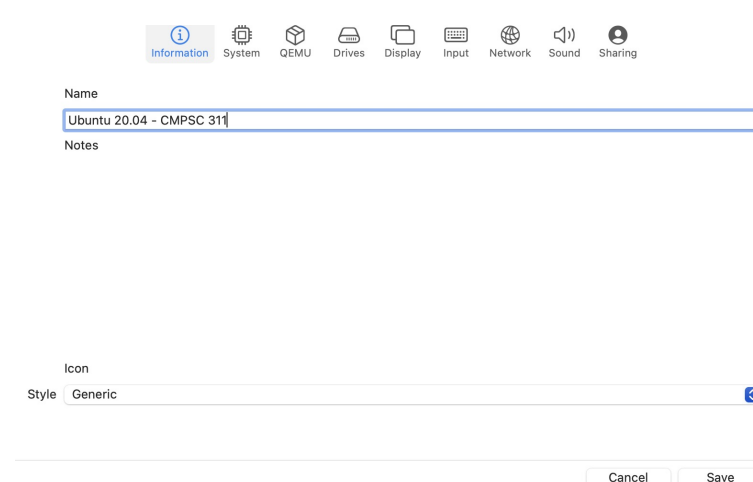
Download Ubuntu 21.04

[Alternative and previous releases >](#)

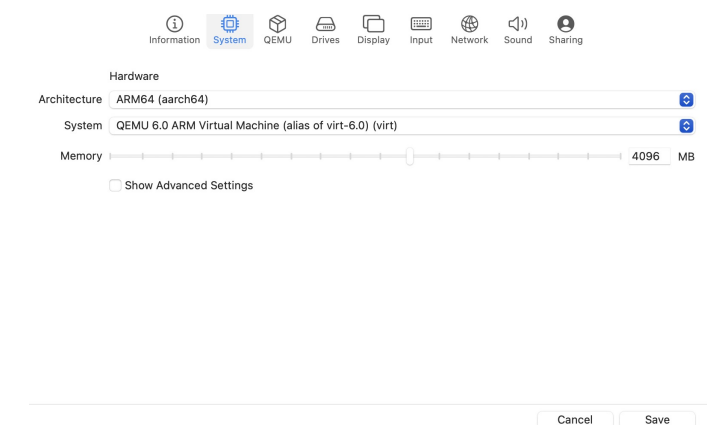
C. Creating a new VM (Mac with M1 chip)



1. Create a new VM

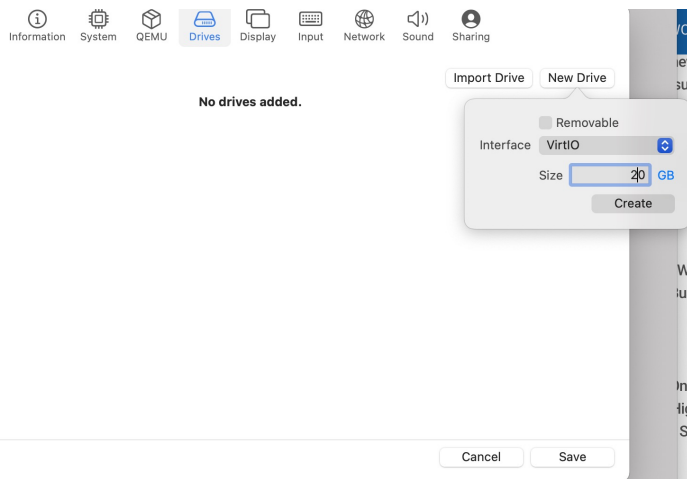


2. Name your VM

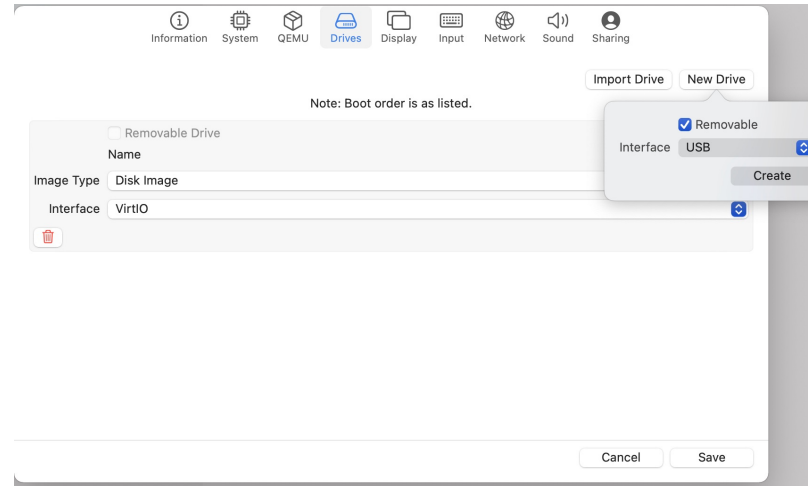


3. Pick "ARM64 (aarch64)" for the architecture and choose the amount of memory (RAM) you want to allocate (4096MB is fine)

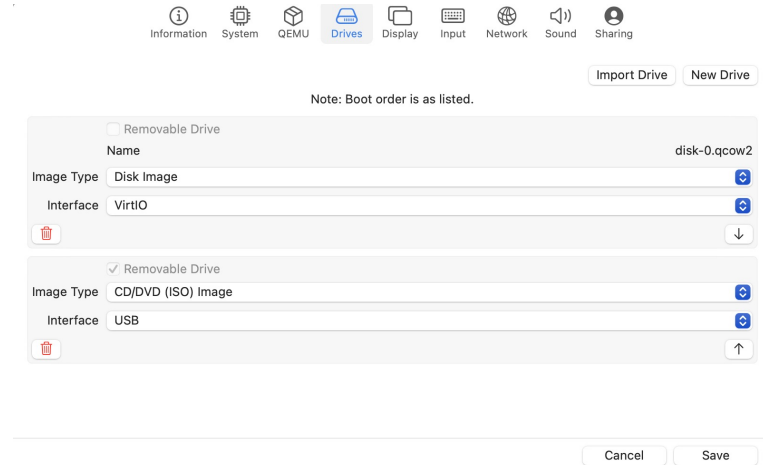
C. Creating a new VM (Mac with M1 chip)



4. Add a "New Drive", VirtIO/20GB



5. Add another "New Drive", Removable/USB

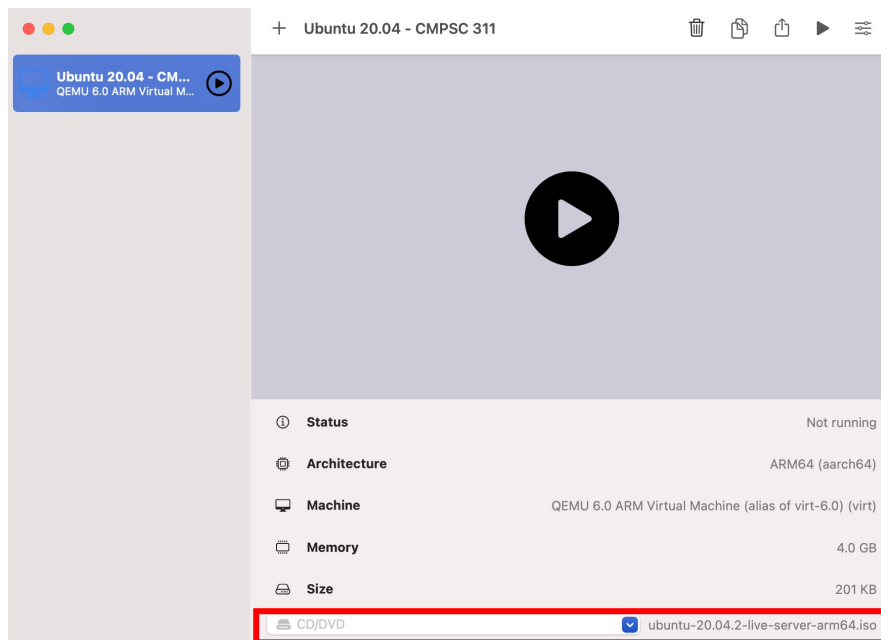


6. Check that your drives are correct

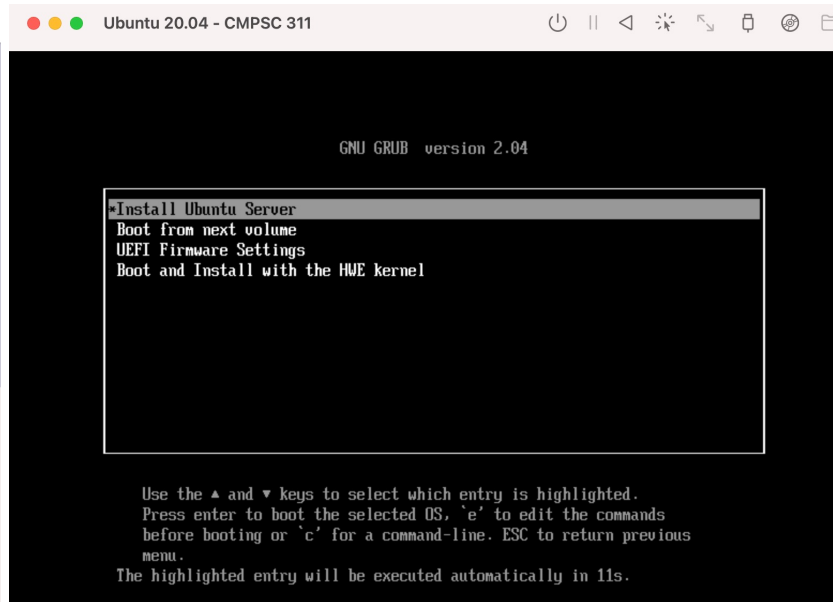
Note: Leave the other options in the other tabs (QEMU, Display, Input, Network, Sound, and Sharing) to the default ones

7. "Save"

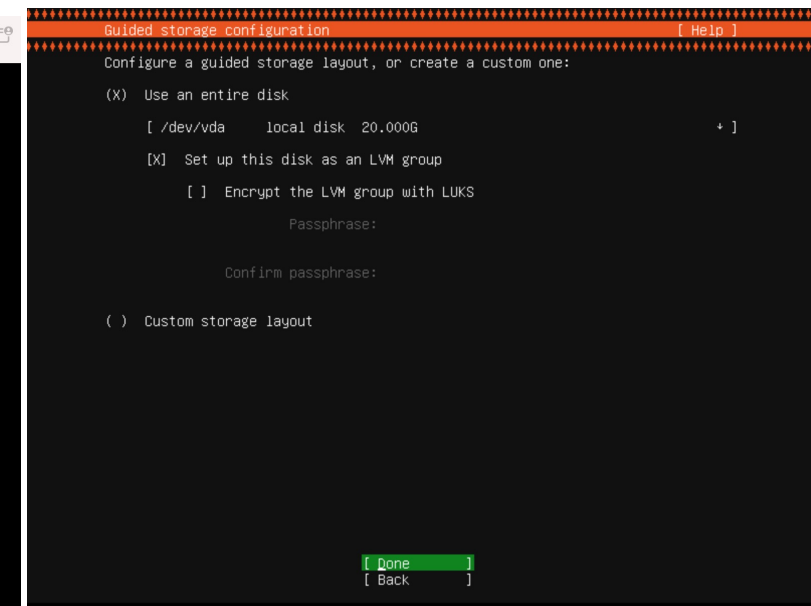
C. Creating a new VM (Mac with M1 chip)



8. Browse CD/DVD and pick the Ubuntu iso that you downloaded previously (/!\ needs to be the ARM version)

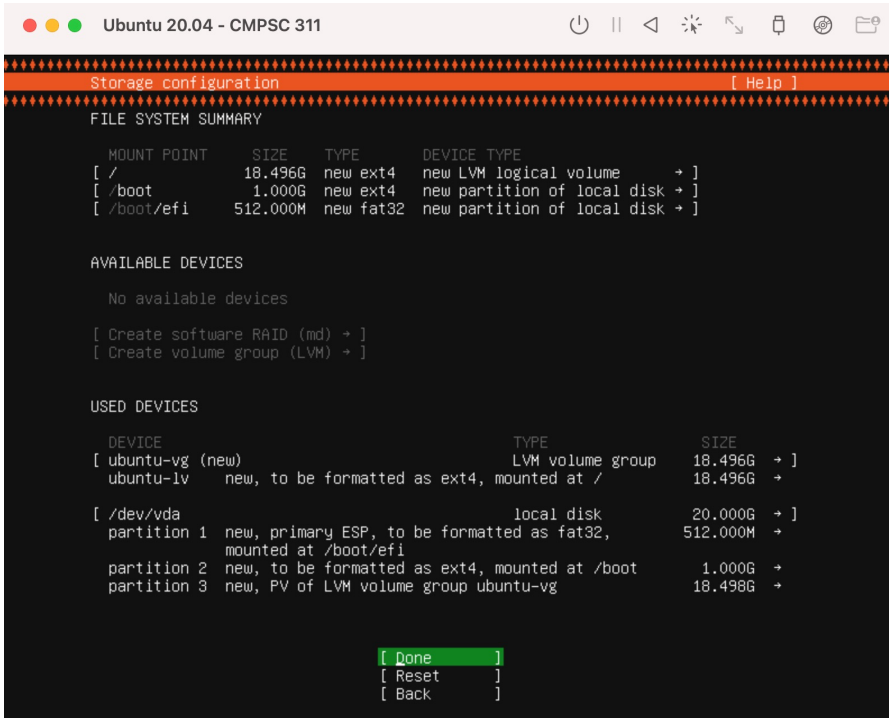


9. Press the "Play Button" to start the VM.
When the VM boots, pick the option "Install Ubuntu Server"



10. Leave the different options to the default ones. When you arrive on the screen above, use "Tab" to navigate down to "Done", then press "Return".

C. Creating a new VM (Mac with M1 chip)



```
Ubuntu 20.04 - CMPSC 311

Storage configuration [ Help ]

FILE SYSTEM SUMMARY

MOUNT POINT  SIZE  TYPE  DEVICE TYPE
[ /          18.496G new ext4 new LVM logical volume + ]
[ /boot      1.000G new ext4 new partition of local disk + ]
[ /boot/efi  512.000M new fat32 new partition of local disk + ]

AVAILABLE DEVICES

No available devices

[ Create software RAID (md) + ]
[ Create volume group (LVM) + ]

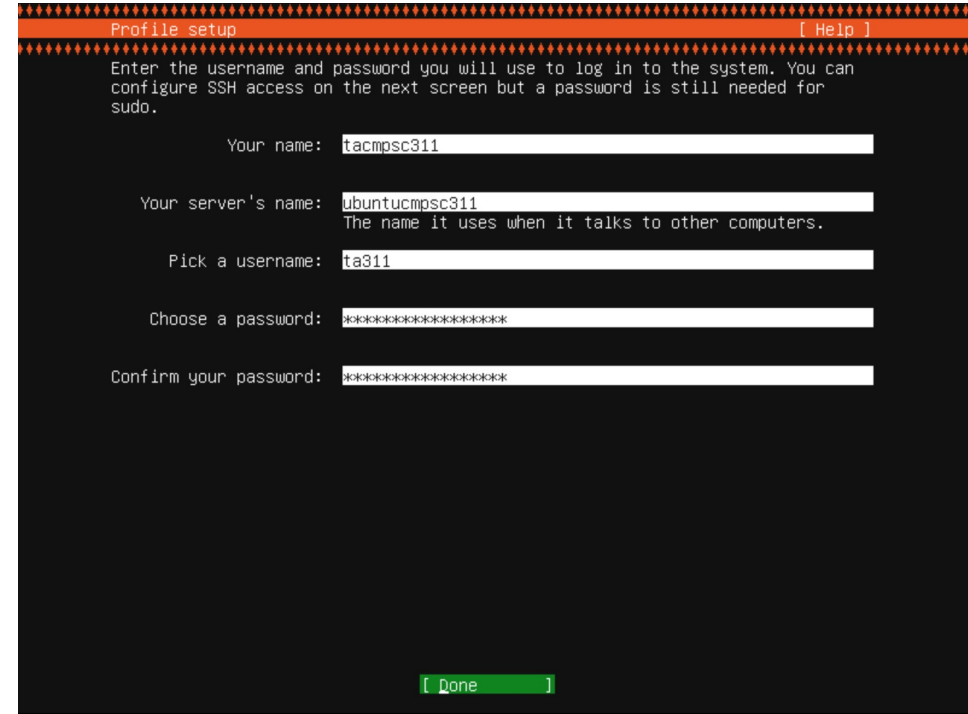
USED DEVICES

DEVICE              TYPE              SIZE
[ ubuntu-vg (new)    LVM volume group 18.496G + ]
ubuntu-lv           new, to be formatted as ext4, mounted at / 18.496G + ]

[ /dev/vda          local disk        20.000G + ]
partition 1         new, primary ESP, to be formatted as fat32, 512.000M + ]
                    mounted at /boot/efi
partition 2         new, to be formatted as ext4, mounted at /boot 1.000G + ]
partition 3         new, PV of LVM volume group ubuntu-vg         18.498G + ]

[ Done ]
[ Reset ]
[ Back ]
```

11. Here again leave the different options to the default ones and use "Tab" to navigate down to "Done", then press "Return".



```
Profile setup [ Help ]

Enter the username and password you will use to log in to the system. You can
configure SSH access on the next screen but a password is still needed for
sudo.

Your name: tacmpsc311

Your server's name: ubuntucmpsc311
The name it uses when it talks to other computers.

Pick a username: ta311

Choose a password: *****

Confirm your password: *****

[ Done ]
```

12. Complete with name, hostname, username, and password (navigate with "Tab")

C. Creating a new VM (Mac with M1 chip)

```
Install complete! [ Help ]

running '/snap/bin/subiquity.subiquity-configure-apt'
/snap/subiquity/2281/usr/bin/python3 true'
curtin command apt-config
curtin command in-target
running 'curtin curthooks'
curtin command curthooks
configuring apt configuring apt
installing missing packages
Installing packages on target system: ['efibootmgr',
'grub-efi-arm64', 'grub-efi-arm64-signed']
configuring iscsi service
configuring raid (mdadm) service
installing kernel
setting up swap
apply networking config
writing etc/fstab
configuring multipath
updating packages on target system
configuring pollinate user-agent on target
updating initramfs configuration
configuring target system bootloader
installing grub to target devices
finalizing installation
running 'curtin hook' |
final system configuration
configuring cloud-init
restoring apt configuration
downloading and installing security updates /

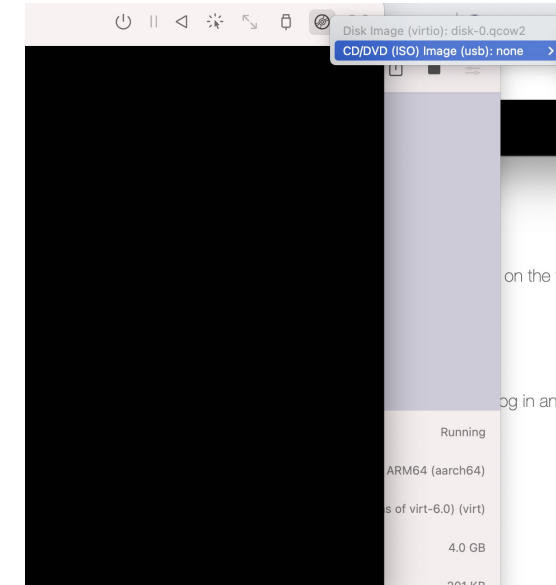
[ View full log ]
[ Cancel update and reboot ]
```

```
Install complete! [ Help ]

/snap/subiquity/2281/usr/bin/python3 true'
curtin command apt-config
curtin command in-target
running 'curtin curthooks'
curtin command curthooks
configuring apt configuring apt
installing missing packages
Installing packages on target system: ['efibootmgr',
'grub-efi-arm64', 'grub-efi-arm64-signed']
configuring iscsi service
configuring raid (mdadm) service
installing kernel
setting up swap
apply networking config
writing etc/fstab
configuring multipath
updating packages on target system
configuring pollinate user-agent on target
updating initramfs configuration
configuring target system bootloader
installing grub to target devices
finalizing installation
running 'curtin hook' -
final system configuration
configuring cloud-init
restoring apt configuration
downloading and installing security updates
subiquity/Late/run

[ View full log ]
[ Reboot Now ]
```

13. Leave the install running, when complete the option "Reboot Now" will appear



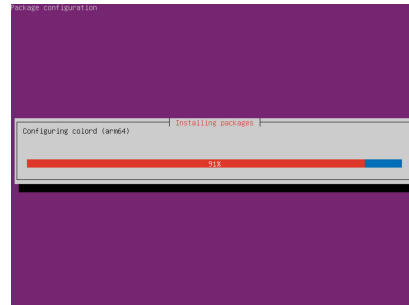
14. While your VM is rebooting, in the upper menu, "Eject" the Ubuntu ISO (you should then see "none")

C. Creating a new VM (Mac with M1 chip)

```
Ubuntu 20.04.2 LTS ubuntuvm311 tty1
ubuntuvm311 login: ta311
Password:
```

15. When your VM has rebooted, you will see the following command line interface. Do not panic, we will now install the desktop GUI. Login with the username and password you configured earlier

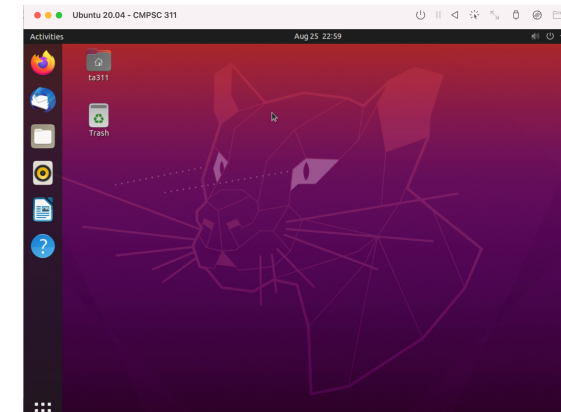
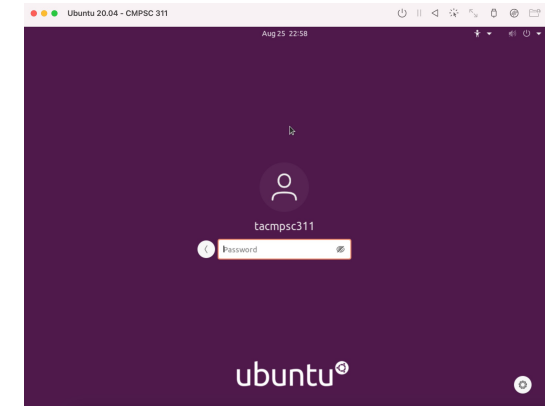
```
$ sudo apt-get install -y tasksel
$ sudo tasksel install ubuntu-desktop
```



```
$ sudo reboot
```

16. Once you are logged in, type the commands above in the terminal to install a desktop GUI and reboot when the install is over.

The first time you use "sudo", you will be prompted to enter your password again.



17. When your VM reboots, you will now have a GUI. Login and enjoy!