

HW1 Report

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SEED in Mac

Platform: Mac M3 System: Sonoma 14.4.1

Pre-req

The setup.docx announce that the environment and setup should only be done in x86 platform, however, when I enter into the official website of [SEEDLAB](#), it provides a newest [document](#) about how to set up an environment in Apple, so I think I can have a try based on the document.

1. Install Homebrew and docker

In fact, it is also no need for me to follow these instructions since I have had one months ago. Just follow the [document](#) in the github.

You should install homebrew in cli and remember to add it into the system environment. For Mac M, the default address of homebrew install is in [/opt](#). And the easiest way I know is to add [:/opt/homebrew/bin](#) to your [.bash_profile](#).

```
export PATH=/usr/local/bin:/System/Cryptexes/App/usr/bin:/usr/bin:/bin:/usr/sbin
:/sbin:/var/run/com.apple.security.cryptexd/codex.system/bootstrap/usr/local/bin
:/var/run/com.apple.security.cryptexd/codex.system/bootstrap/usr/bin:/var/run/com.apple.security.cryptexd/codex.system/bootstrap/usr/appleinternal/bin:/Library/Apple/usr/bin:/Applications/Wireshark.app/Contents/MacOS:~/dreamking60/Nand/nand2tetris/tools:/opt/homebrew/bin
```

I meet an error when I run [brew install chipmk/tap/docker-mac-net-connect](#). But we can jump this procedure first.

```
fatal: not a git repository (or any of the parent directories): .git
go build -ldflags "-s -w -X github.com/chipmk/docker-mac-net-connect/version.Version=v0.1.2 -X github.com/chipmk/docker-mac-net-connect/version.SetupImage=ghcr.io/chipmk/docker-mac-net-connect/setup" github.com/chipmk/docker-mac-net-connect
# github.com/chipmk/docker-mac-net-connect
link: golang.org/x/net/internal/socket: invalid reference to syscall.recvmsg
make: *** [build-go] Error 1
```

If reporting this issue please do so at (not Homebrew/brew or Homebrew/homebrew-core):

<https://github.com/chipmk/homebrew-tap/issues>

2. Install VMware Fusion

In fact, I don't need to install VMware Fusion since I already have one. After Broadcom owns VMware Company, it is always hard to access the download link about VMware Fusion though it is free to download now. [VMware Fusion Download Link](#) Click the link and we need to register an account and apply for a license to free download. It always needs minutes to hours to wait for the account check.

VMware Fusion Pro for Personal Use (For Intel-based and Apple silicon Macs) 13.5.2

[Product Download Help](#)

Primary Downloads

Open Source

<input type="text"/> Search	13.5.2	520445	English
<input checked="" type="checkbox"/> Expand All			
VMware Fusion Pro for Personal Use (For Intel-based and Apple silicon Macs)	Release 13.5.2	Release Level Info 520445	▼
File Name	Last Updated	SHA2	MD5
VMware Fusion 13.5.2 (for Intel-based and Apple silicon Macs)			
VMware-Fusion-13.5.2-23775688_universal.dmg(750.23 MB) Build Number: 23775688	May 10, 2024 05.50AM	baaa201c797af8e32a2ec3ae78c69bfedbe5c5c7960c 3673885bd84e42ddfb9	0601c5b92139b3cbab3eba68217f6576

Finally, you can find this page which means that you are allowed to download the software.

3. Create Virtual Machine

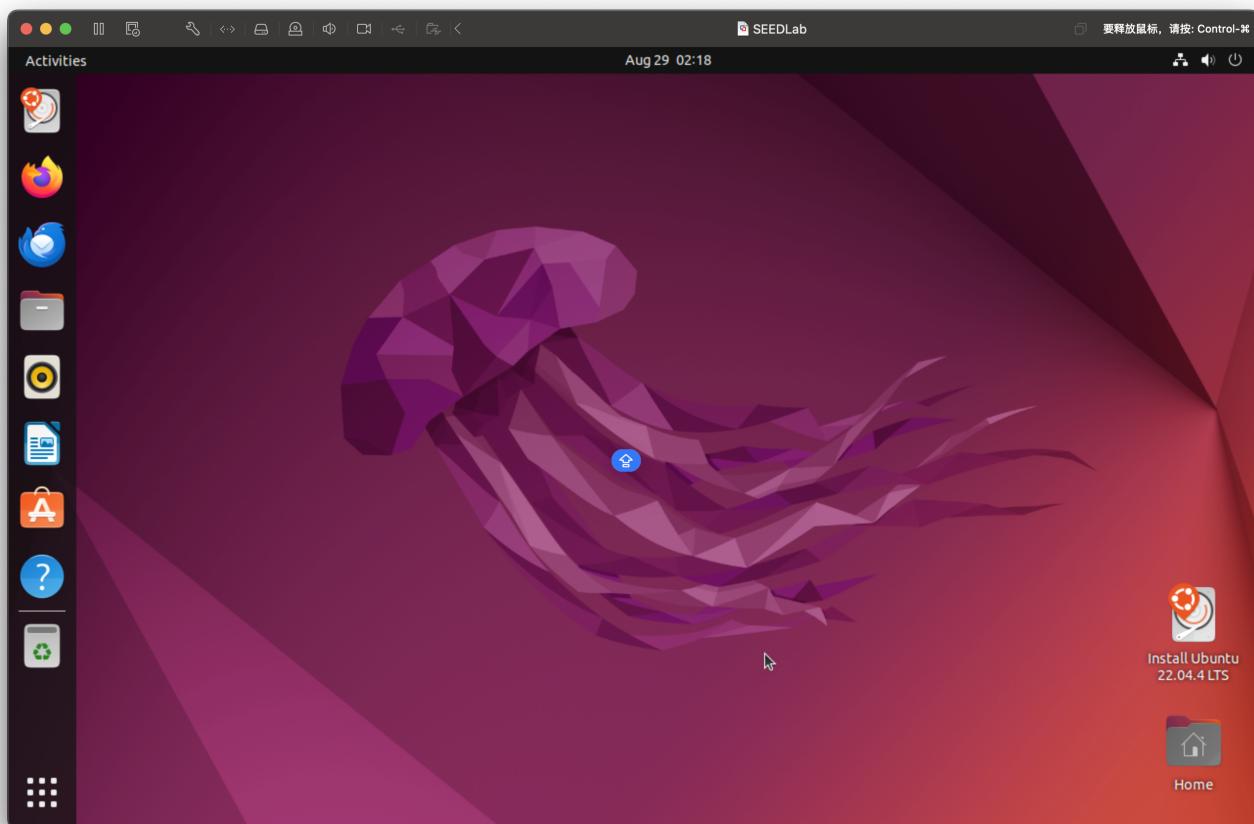
(I won't provide procedure one by one since there is no need to talk about each procedure so detail.)
Download [Ubuntu22.04.3](#) iso file.

Aftering downloading, open vmware fusion.

Create a new Virtual Machine named SEED. Just select disk or img and find the iso file you download and nothing special you need to configure.

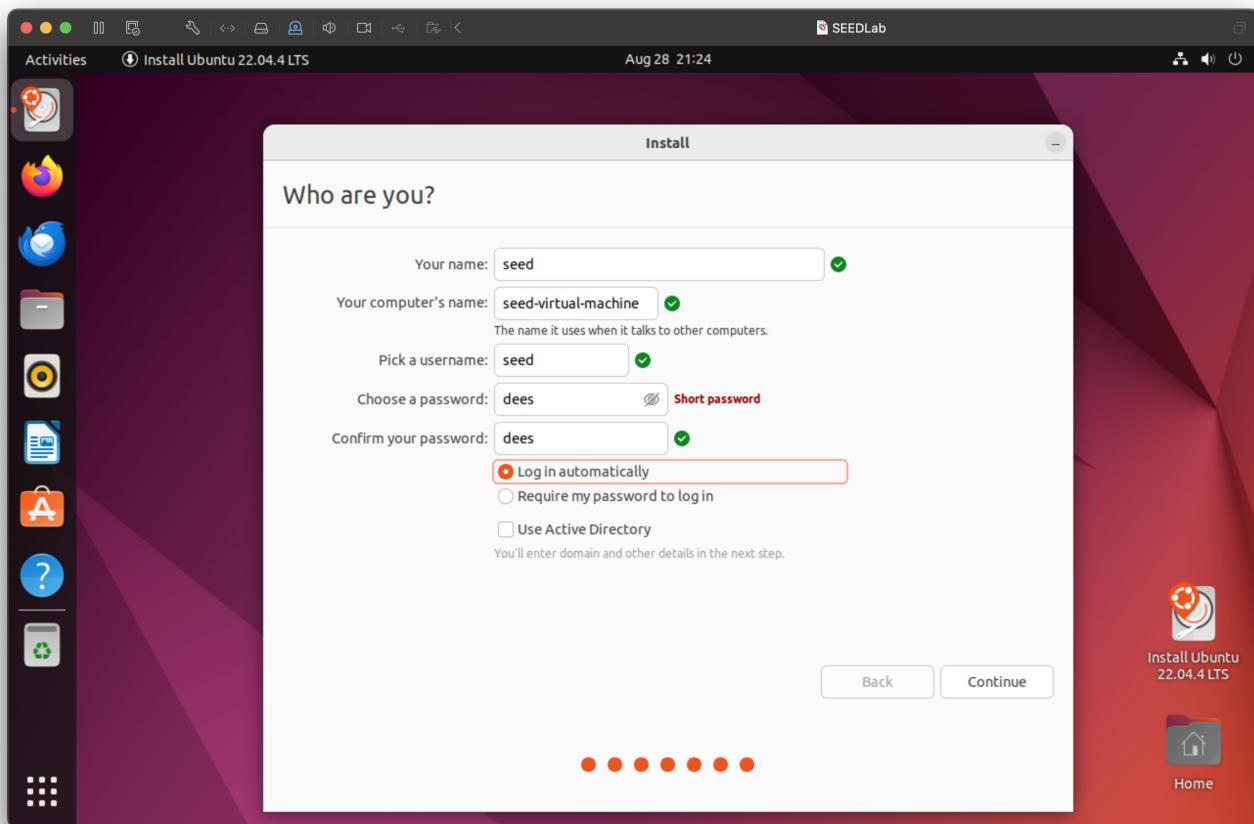
And then click continue and finish button. Then a new virtual machine is created.

Open the Virtual machine and install the ubuntu. When you can see this page, it means that you are successfully entering the installation page.



Just select install Ubuntu22.04.4LTS, and install based on minimal installation.

Configure the user message as the following picture and then continue to install required components.



After installation, click restart now and follow the instructions on the screen.

Finally, run the command.

```
sudo apt update
sudo apt install open-vm-tools-desktop
sudo reboot
```

4. Install software and configure

Use wget to download [src-arm.zip](#) file.

```
wget https://seedsecuritylabs.org/setup/src-arm.zip
```

Unzip the file.

```
unzip src-arm.zip
```

cd into src-arm and run [./install.sh](#) script.

After the installation of require files, just run [sudo su seed](#) to change the user.

Now the setup is over!

5. prompt display

Configure the prompt as the following.

```
export PS1='[$(date +"%m/%d/%y")]\u@VM:Steven\$ '
```

So the result is as following.



SEED in Windows11

Platform: Lenovo Xiaoxin 14pro System: Windows11

1. Download & Install Virtual Box

Download Virtual Box in [offical website](#)

Virtual Box is a famous free virtual machine platform. VMware Workstation is another one.(I think they have little difference when we use in this lab)

After downloading the package, run it and just click next step, nothing special we need to configure while installing.

2. Create a VM

Open Virtual Box and create a new virtual machine.

Name and Version

Name: CSE523Lab Type: Linux Version: Ubuntu (64-bit)



Memory & Hard Disk

Choose 4GB memory(2GB at least) and 4 CPU(one CPU at least)

Choose 80GB as a space of virtual hardware to make sure you have enough space.

Settings

Based on the [document](#) to configure.

```
General
Advanced Tab:
  Shared Clipboard: Bidirectional
  Drag'nDrop: Bidirectional

System:
Motherboard Tab:
  Base Memory: 4GB
  Extended Feature: Enable I/O APIC
```

Processor Tab:

Processors(s): 4 CPU

Extended Features:

Enable PAE/Nx

Acceleration Tab:

Hardware Virtualization:

Enable Hyper-V

Enable Nested Paging

Display:

Screen Tab:

Video Memory: 28 MB

Graphic Controller: VMSVGA

Acceleration: Enable 3D Acceleration

Network:

Adapter 1:

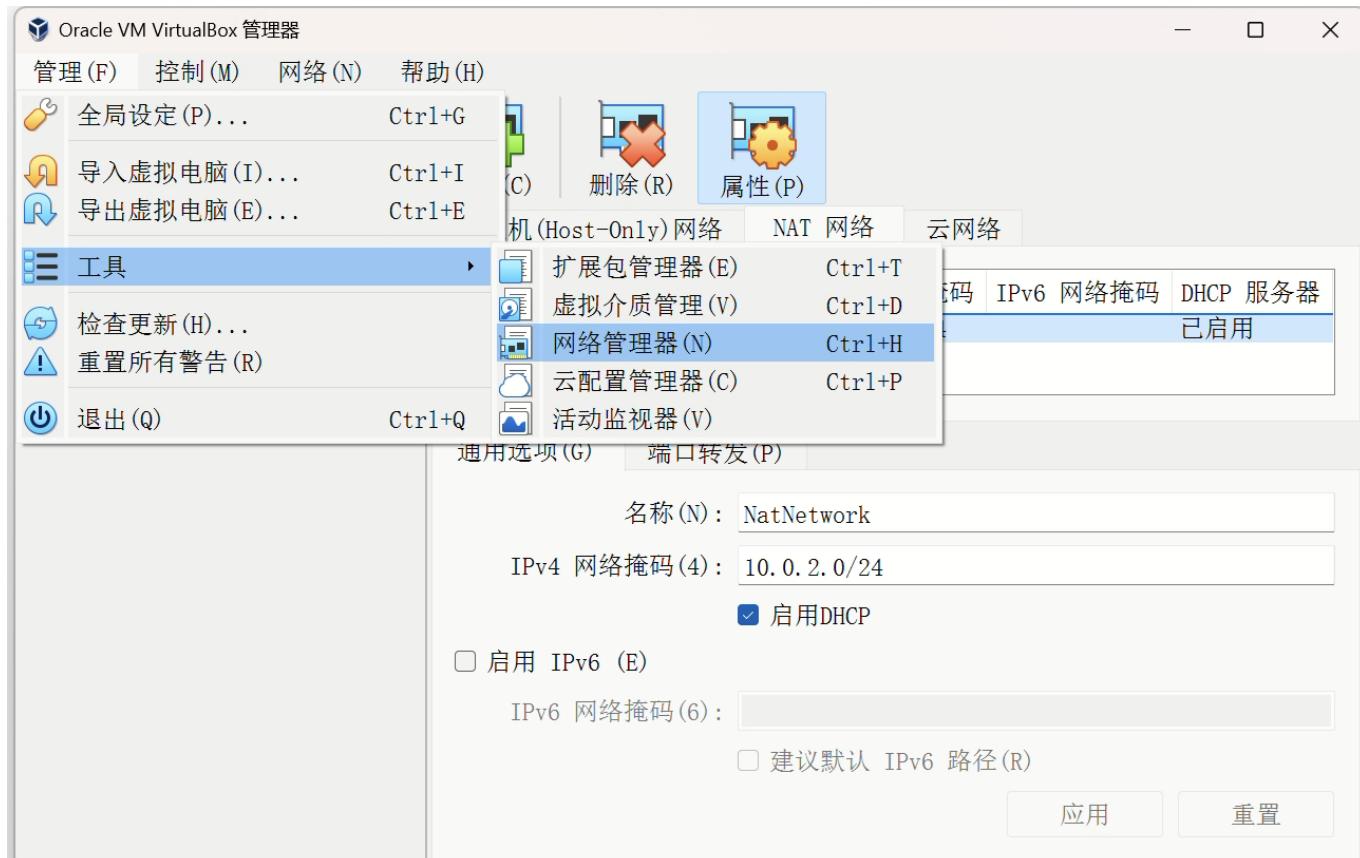
Attached to: NAT Network

Advanced:

Promiscuous Mode: Allow All

MAC Address: (click generate new MAC)

Warn: If you cannot configure NAT Network, maybe it is because you didn't create a NAT Network in Virtual Box. According to [document](#), we find the internet operator or just use Ctrl+H to find the operator.



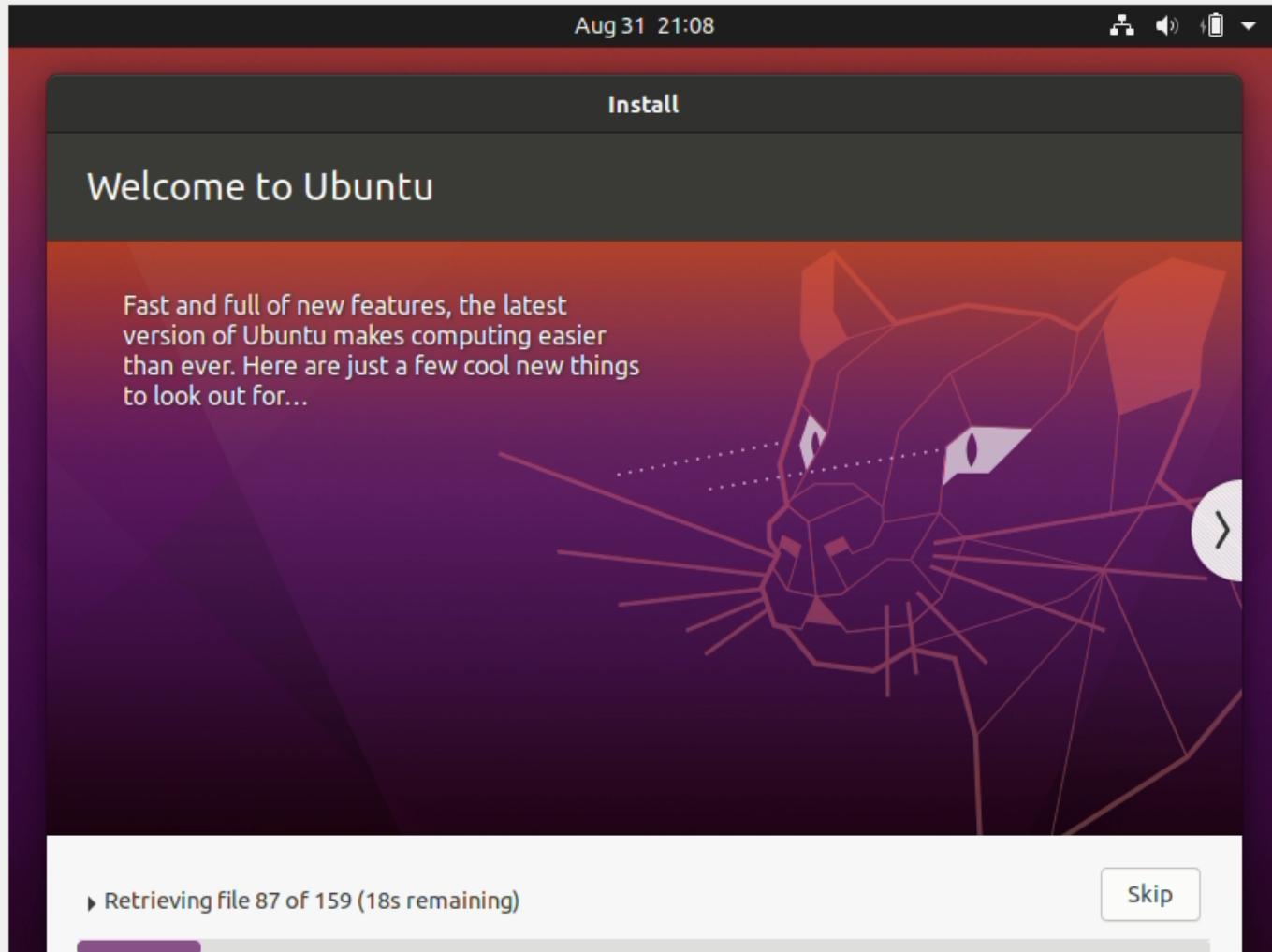
In NAT Network, click to create a new Network, and just use the default configure.

3 Download Ubuntu

In the [official website](#), download 64bit PC(AMD64) desktop image.

After downloading ubuntu .iso file. Use it as a virtual disk of the VM, then we start the VM and install ubuntu.





prompt display

Add the following in .bashrc file.

```
export PS1='[$(date +"%m/%d/%y")]\u@VM:Steven$ '
```

```
seed@SEED-CSE523S: ~
^C
bash: date+%m/%d/%y: No such file or directory
[]seed@VM:Steven$ source .bashrc
bash: date+%m/%d/%y: No such file or directory
[]seed@VM:Steven$ gedit .bashrc
bash: date+%m/%d/%y: No such file or directory
[]seed@VM:Steven$ export PS1='\[ \u@VM \$ '
Mon Sep 02 seed@VM $export PS1='[\$(date "+%m/%d/%y")]\u@VM \$ '
[\$(date "+%m/%d/%y")]seed@VM $ export PS1='[\$(date "+%m/%d/%y")]\u@VM \$ '
[\$(date "+%m/%d/%y")]seed@VM $ export PS1='[\$(date "+%m/%d/%y")]\u@VM \$ '
[09/02/24]seed@VM $ gedit .bash
[09/02/24]seed@VM $ gedit .bashrc
[09/02/24]seed@VM $ source .bashrc
bash: date+%m/%d/%y: No such file or directory
[]seed@VM:Steven$ gedit .bashrc
bash: date+%m/%d/%y: No such file or directory
[]seed@VM:Steven$ source .bashrc
bash: date+%m/%d/%y: No such file or directory
[]seed@VM:Steven$ gedit .bashrc
bash: date+%m/%d/%y: No such file or directory
[]seed@VM:Steven$ source .bashrc
[\$(date "+%m/%d/%y")]seed@VM:Steven$ gedit .bashrc
[\$(date "+%m/%d/%y")]seed@VM:Steven$ source .bashrc
[09/02/24]seed@VM:Steven$ █
```