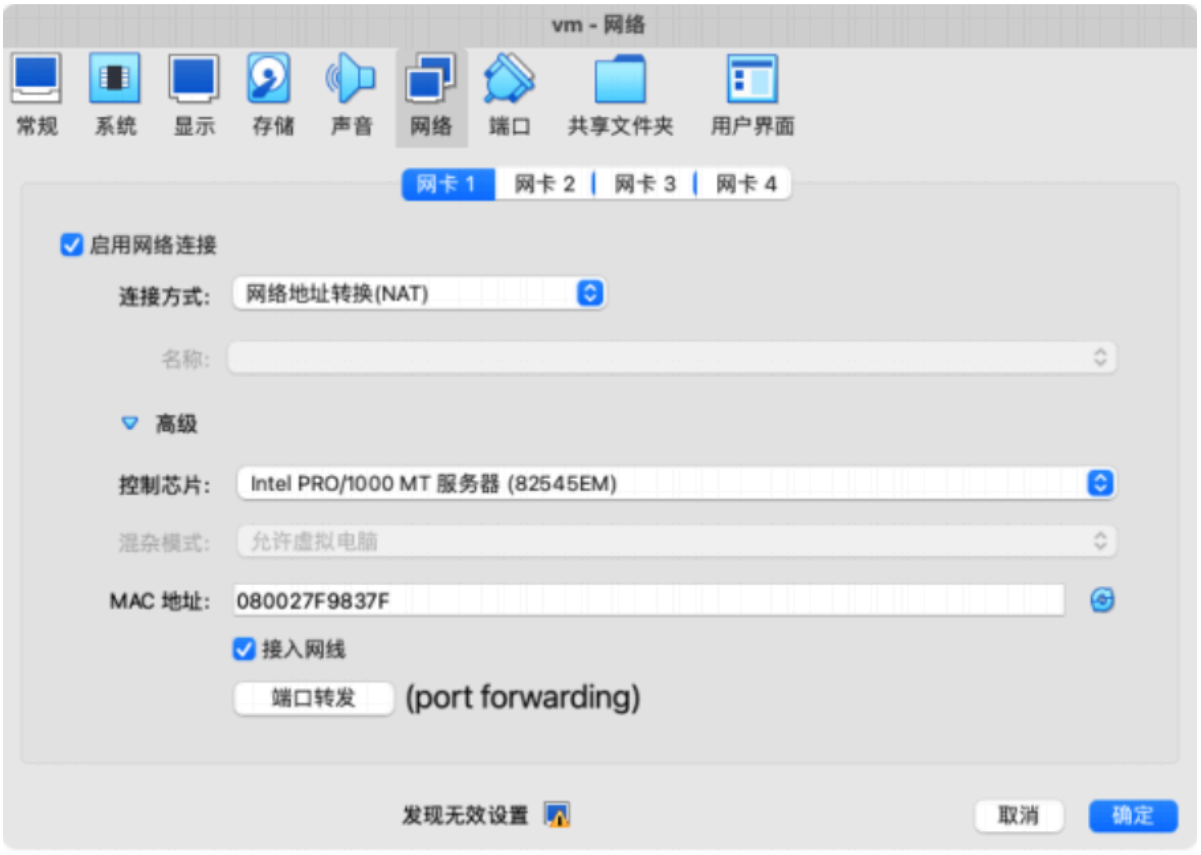
VM Setting

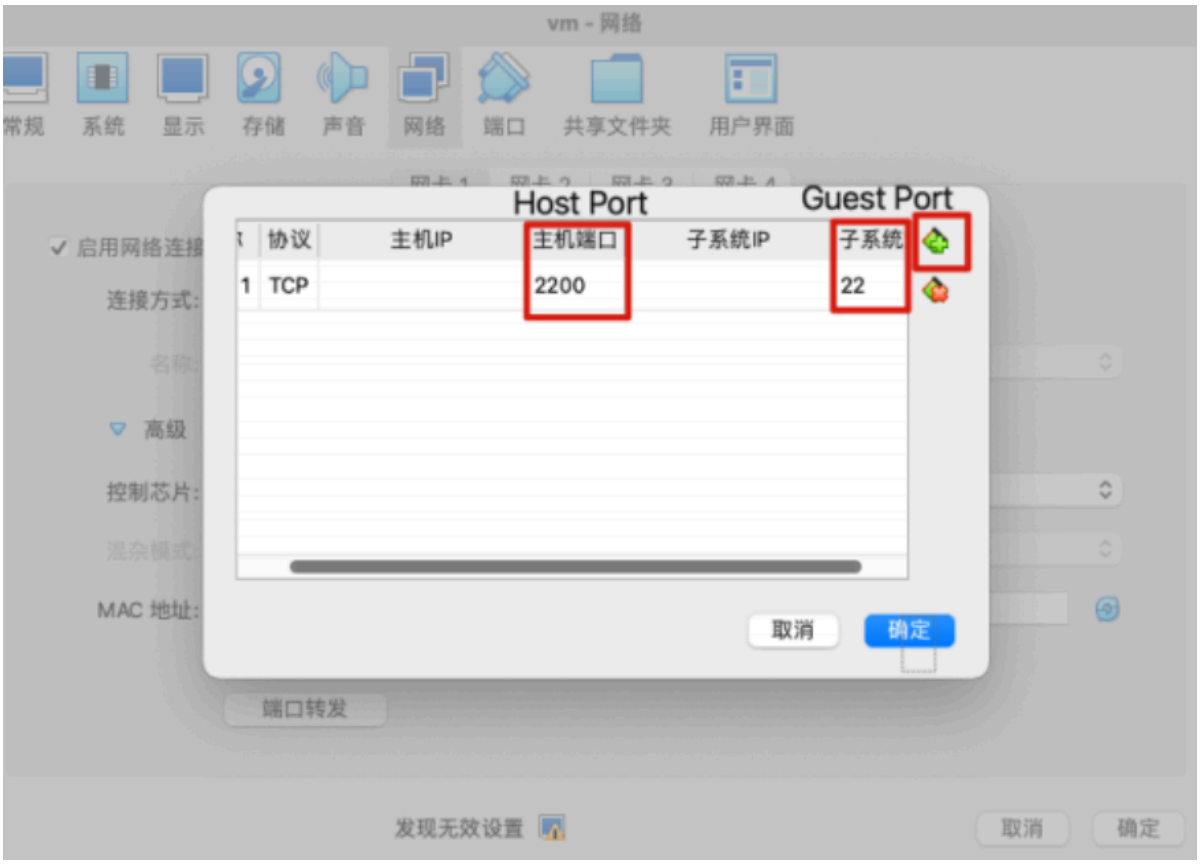
Virtual Machine Login and Usage Instruction

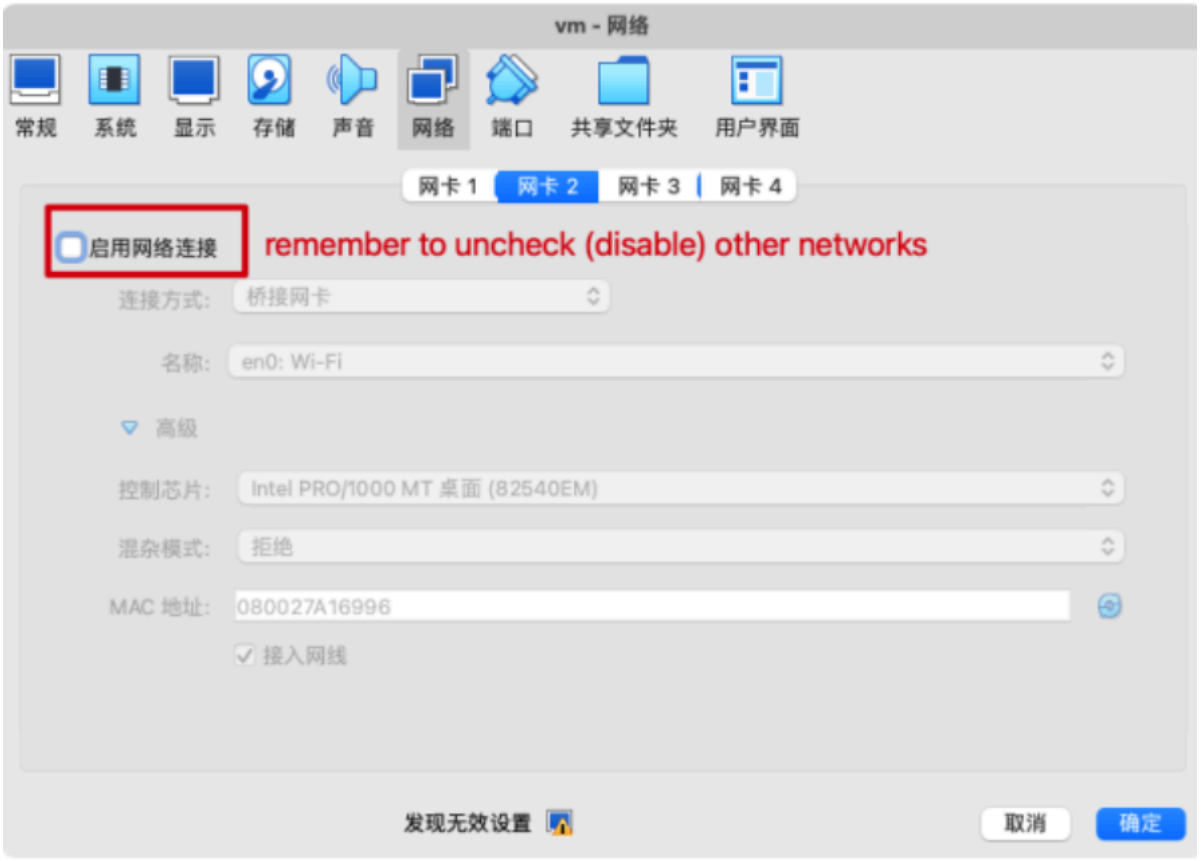
Since the project3 is based on xv6, it requires a series of toolchain to support. We have already prepared all necessary environments for you. We provide the CSC3150_a3_xv6.ova file for x64 chip users(can be imported into VirtualBox or VMware) and the CSC3150_a3_xv6.qcow2 file for Macbook m1/2 users (can be imported into UTM).

For VirtualBox users

(Normally, all versions would run well. We checked the 7.0 version), network configuration can be referred to as follows: Only one network, i.e., **Network Address Translation (NAT)**. Set port forwarding configuration as **host port:2200, guest port:22**.



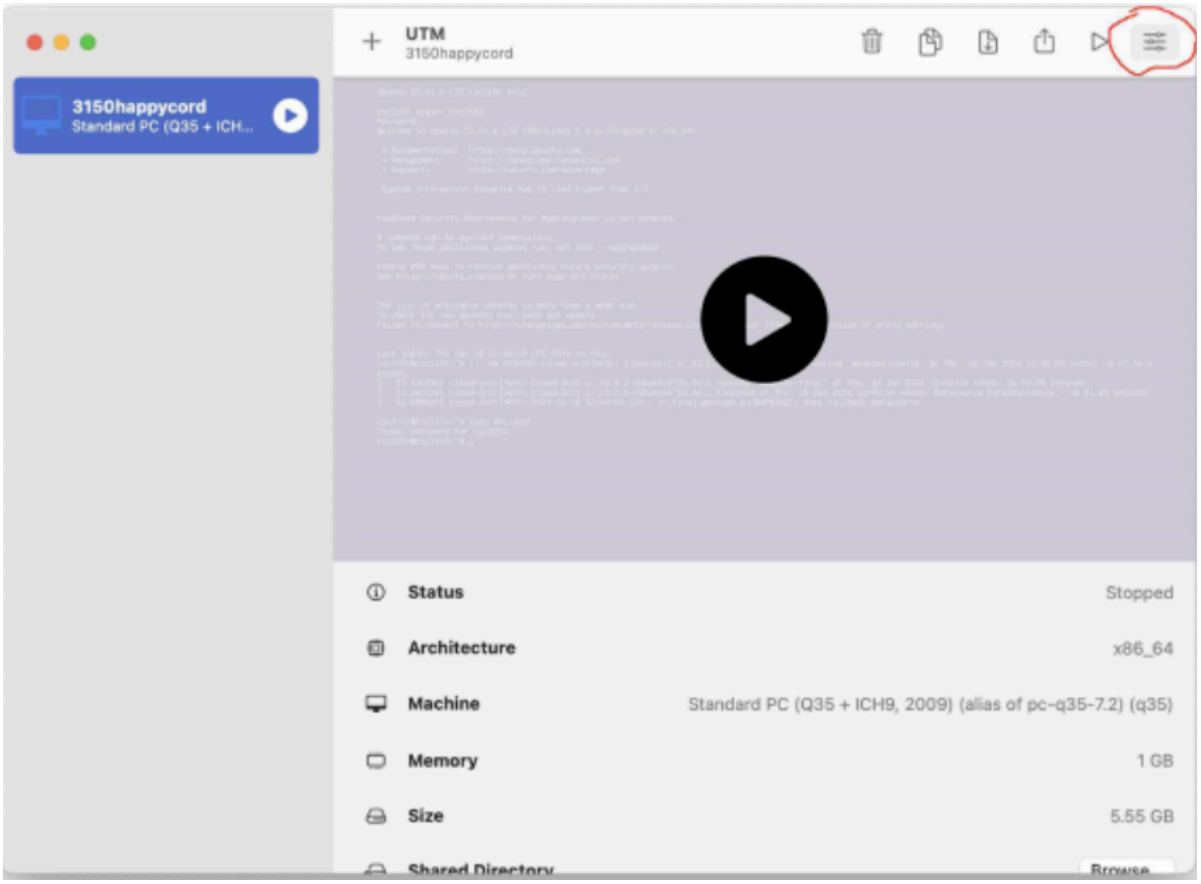


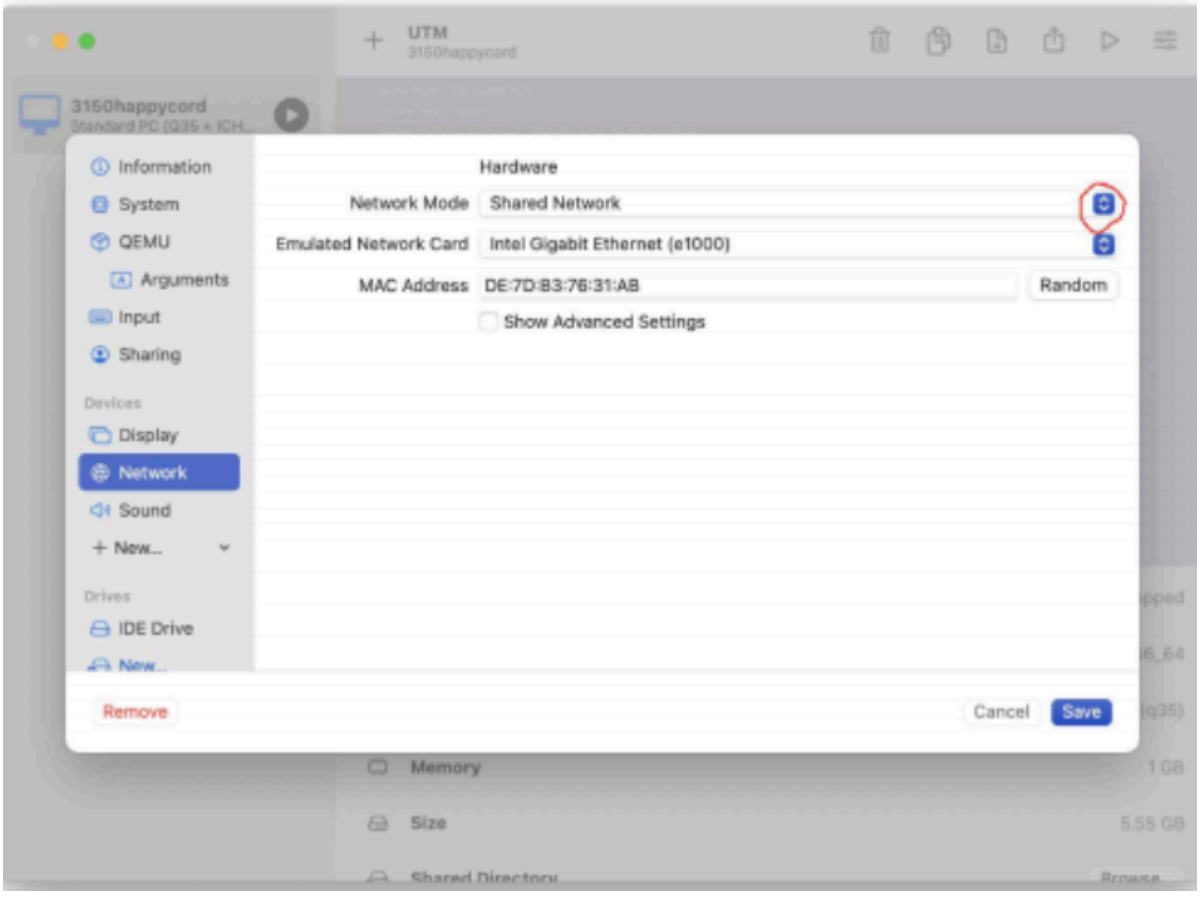


For UTM users (Macbook M1/M2), follow this quick tutorial to import the .qcow2 file.

The network settings of UTM are as follows:

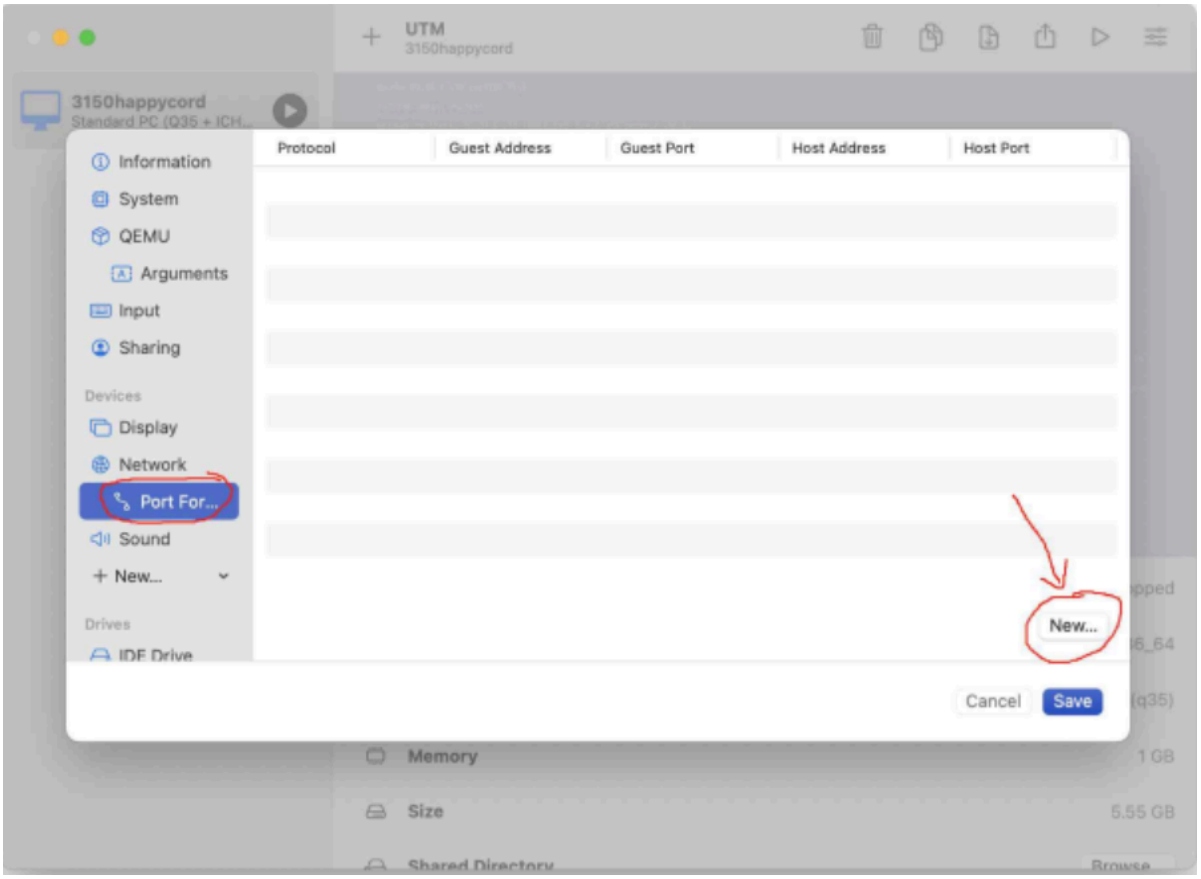
First open the network configuration of imported VM.



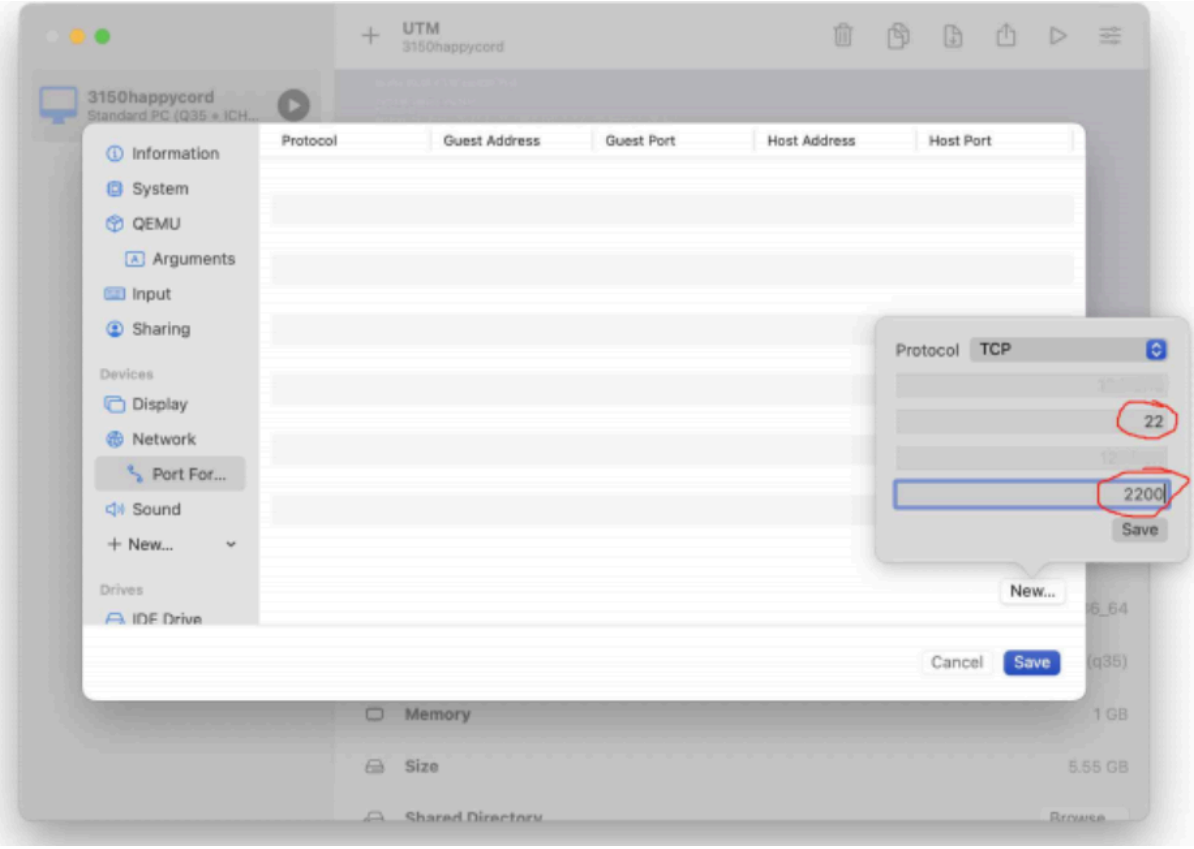


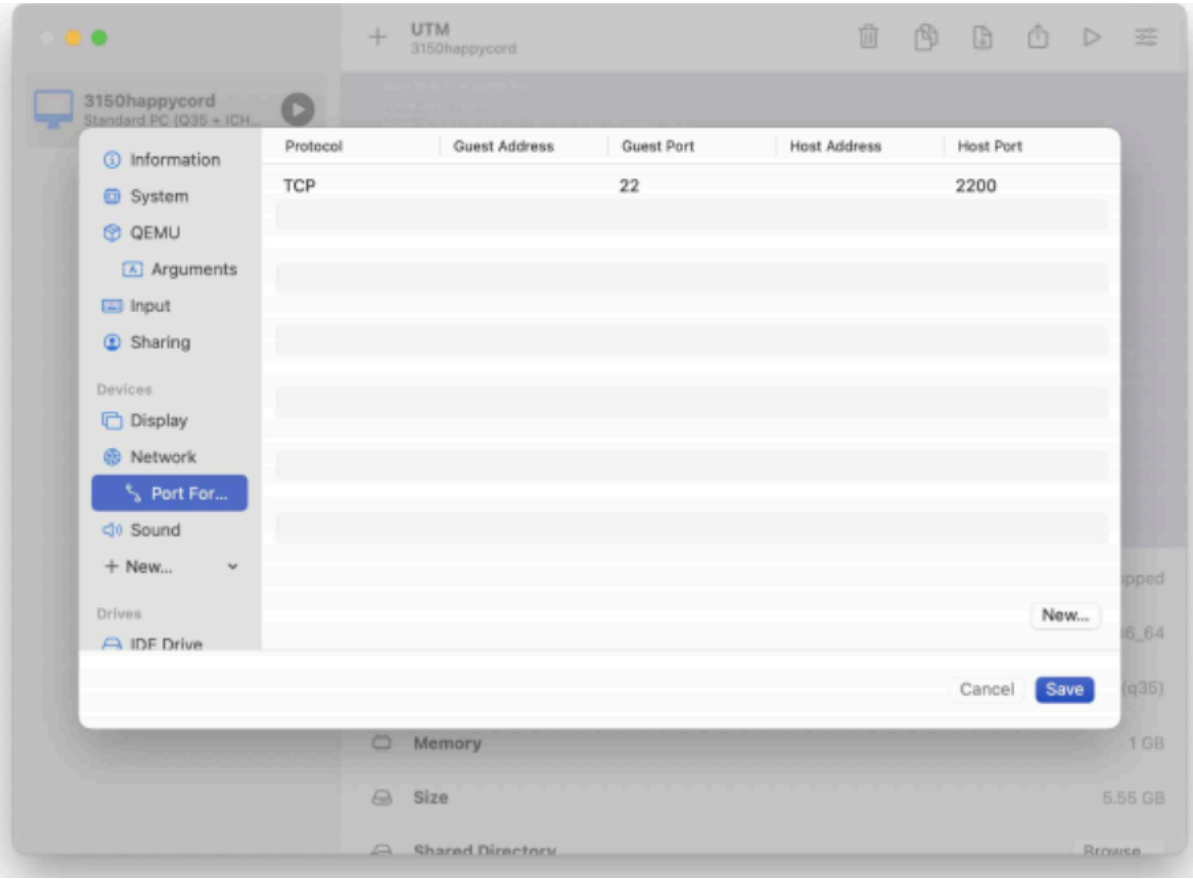
For network mode, choose Emulated VLAN

Press 'Port Forward...', then press 'New...'



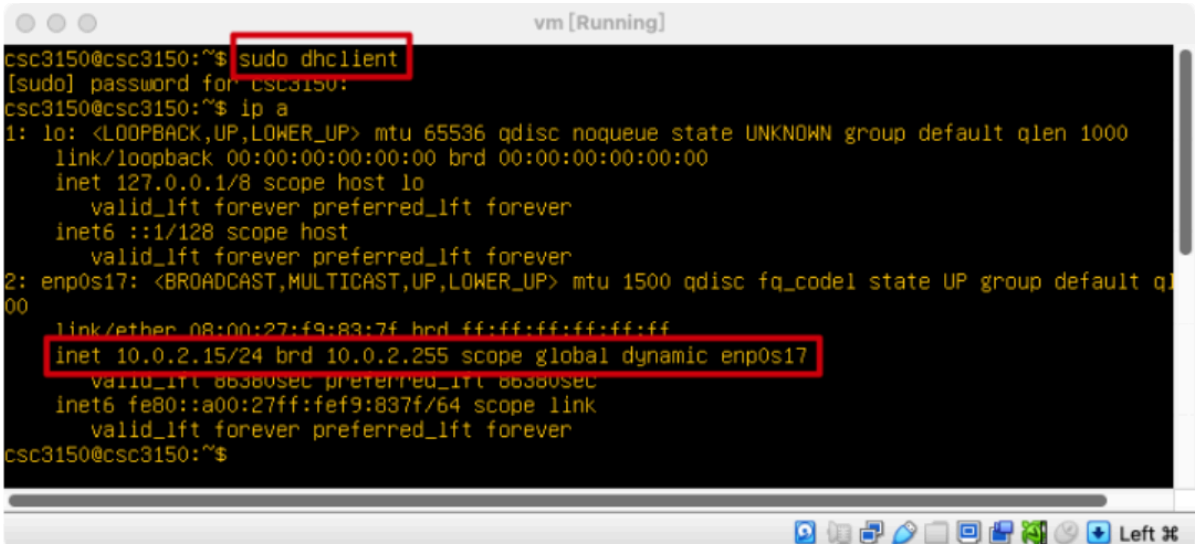
Set the new port forward rule as following



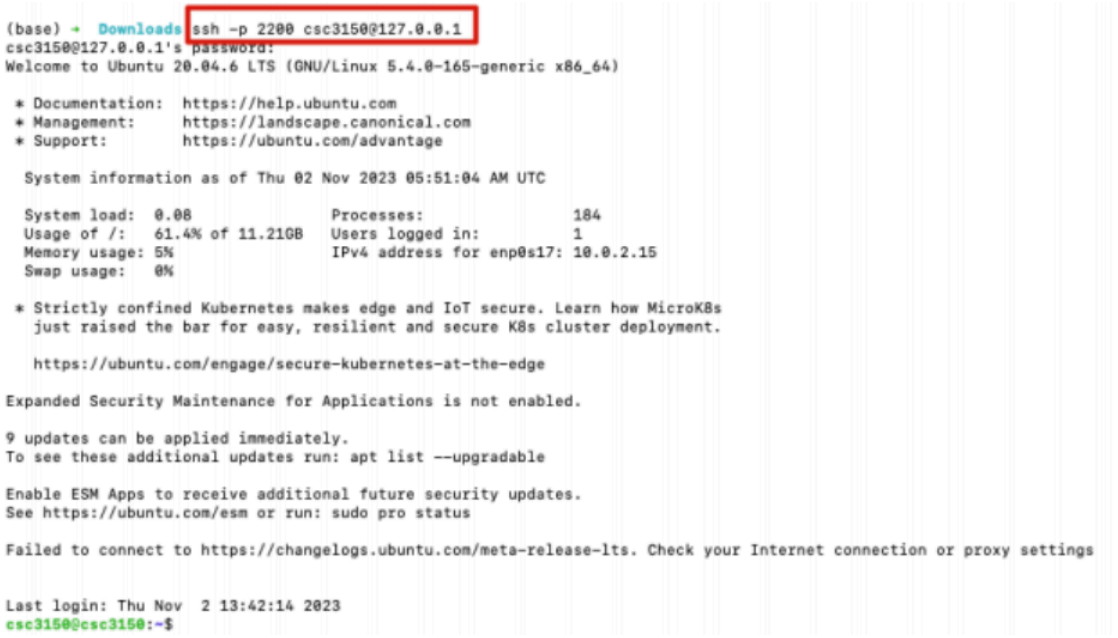


For All Students

- Log in the virtual machine through the username **csc3150** and password **csc3150**
- Use 'sudo dhclient' command to assign an IP address. Then try 'ip a' again.



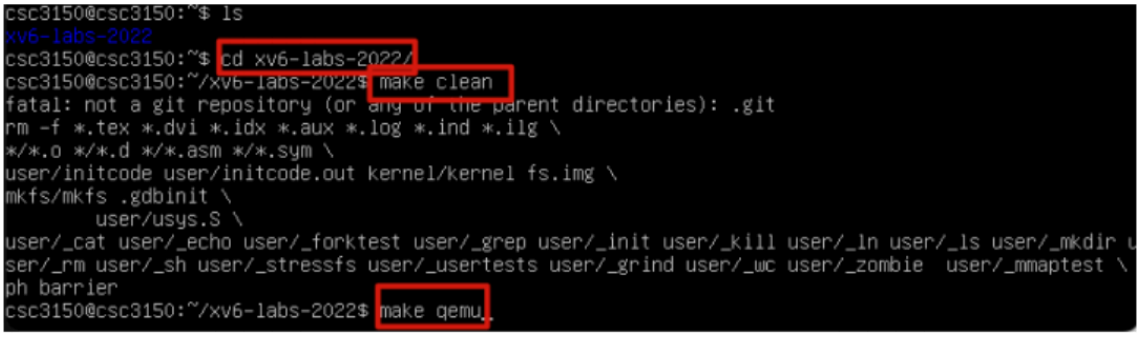
- If you can see the assigned IP shown in the above figure, dhclient works. Then, we use the following command to connect.
    - *ssh -p 2200 csc3150@127.0.0.1*



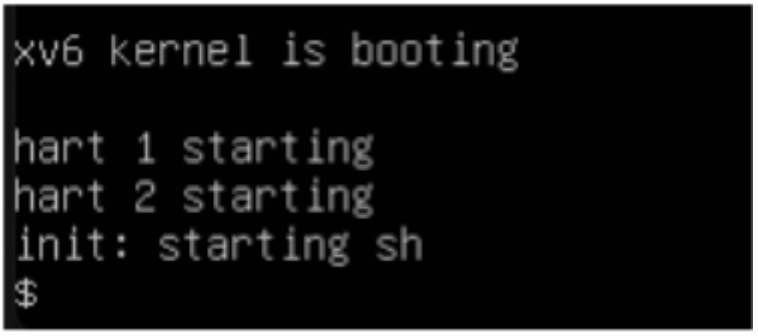
To Run The Project

1. We have put the template under the default directory. Go to the 'xv6-labs-2022' directory and try the following command to compile and run the project

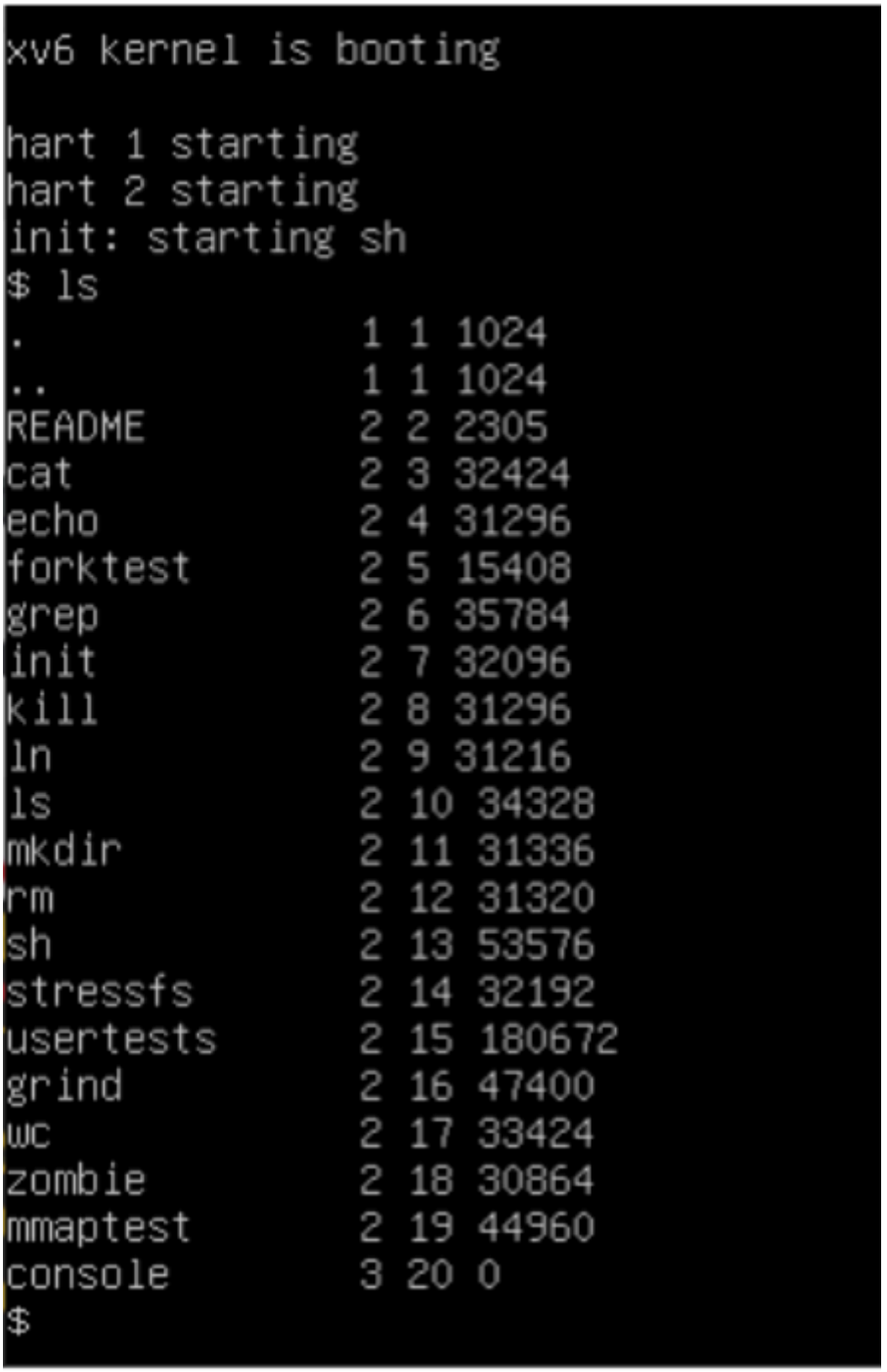
   a. (xv6-labs-2022 is the assignment template we gonna to use in assignment 3 and 4, have a try if the following works well)



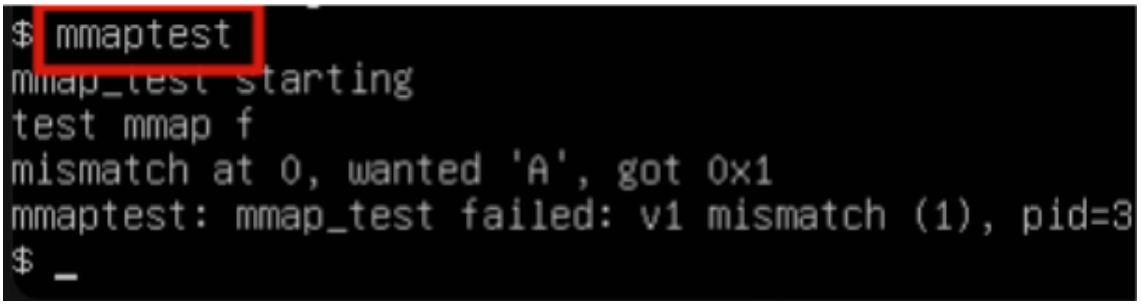
2. After 'make qemu', the xv6 system powers on.



3. Try 'ls'. You are expected to have the following output like this



4. Try 'mmaptest'. You are expected to have the following output.



5. To quit the xv6 system, press Ctrl a. Leave it. Then type x.