5281 資料中心網路技術(英文授課)
Data Center Networking Technology

Project 1 Report

Student Information

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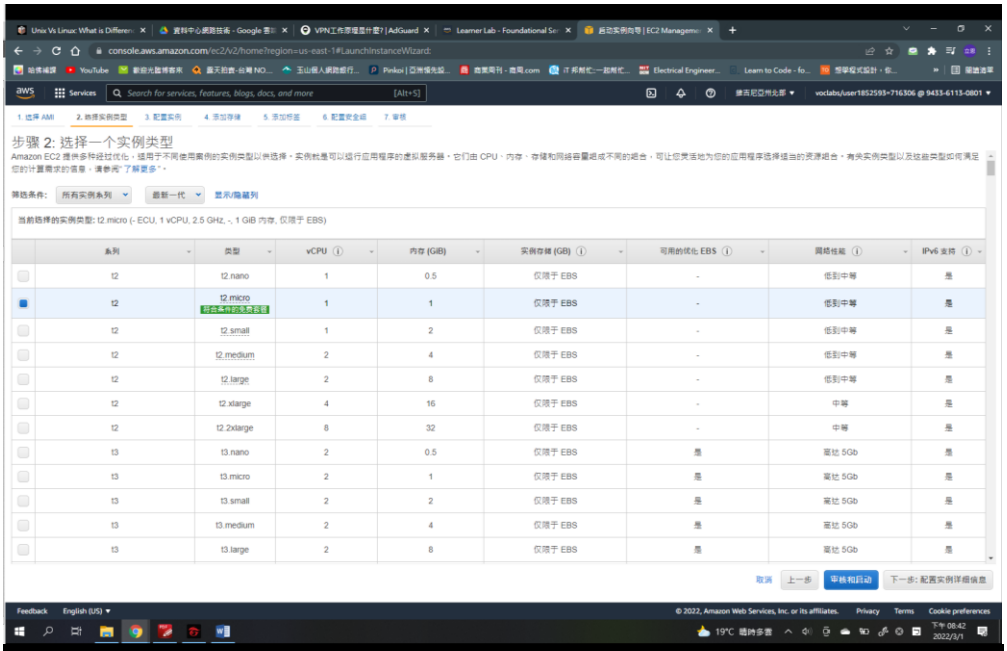
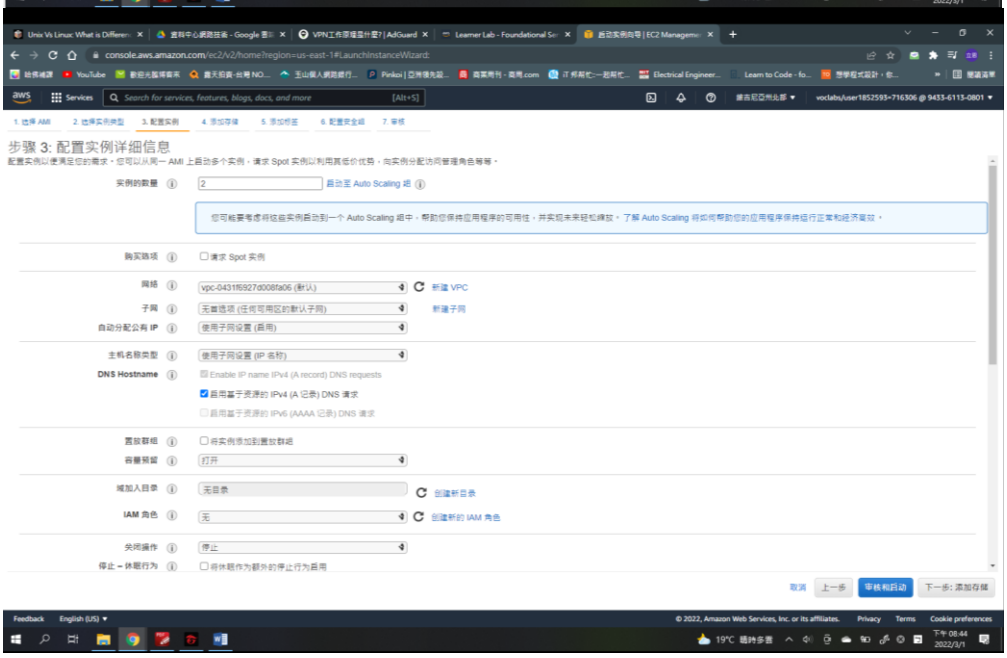
Project Workflow Summary

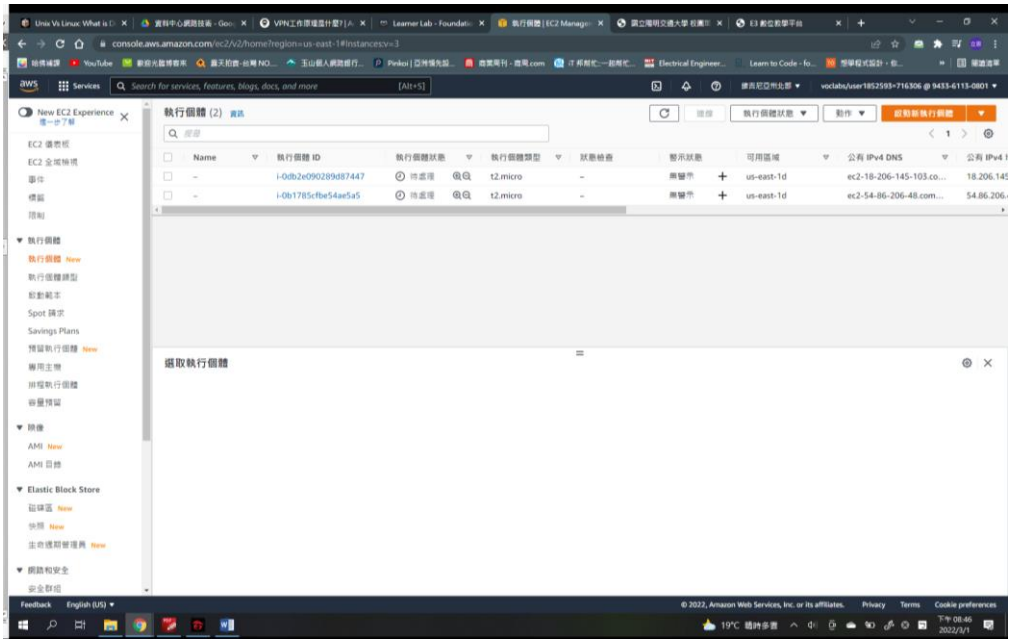
註冊帳號和移動到 module 的部分因為講義上有寫，所以這邊跳過

在移動到 module 後點選 start lab，然後再點選 AWS，並首先建立兩個 virtual machine instance

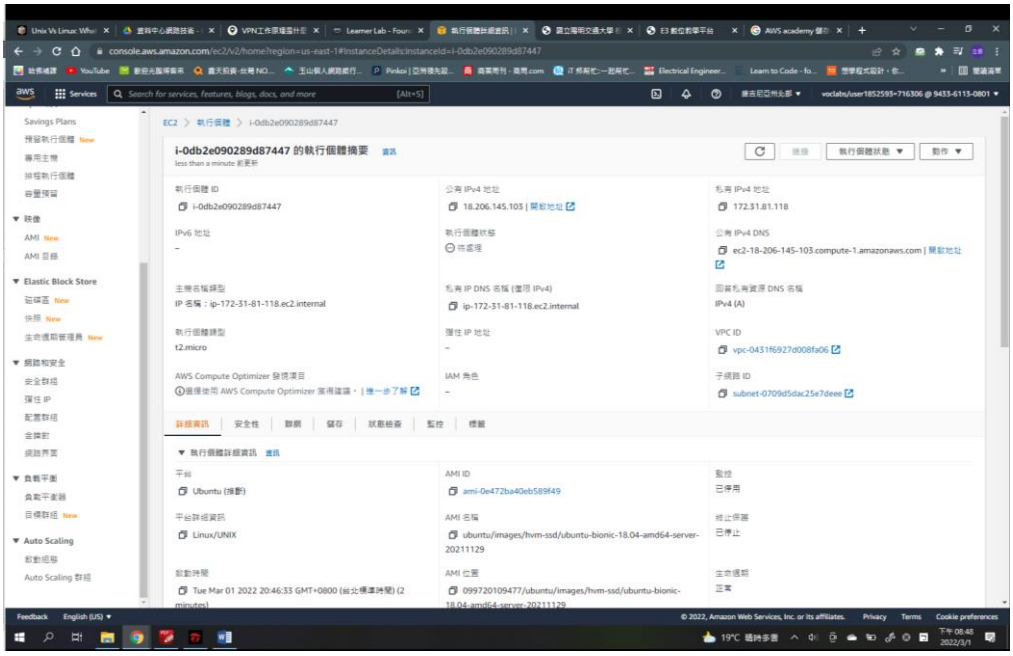


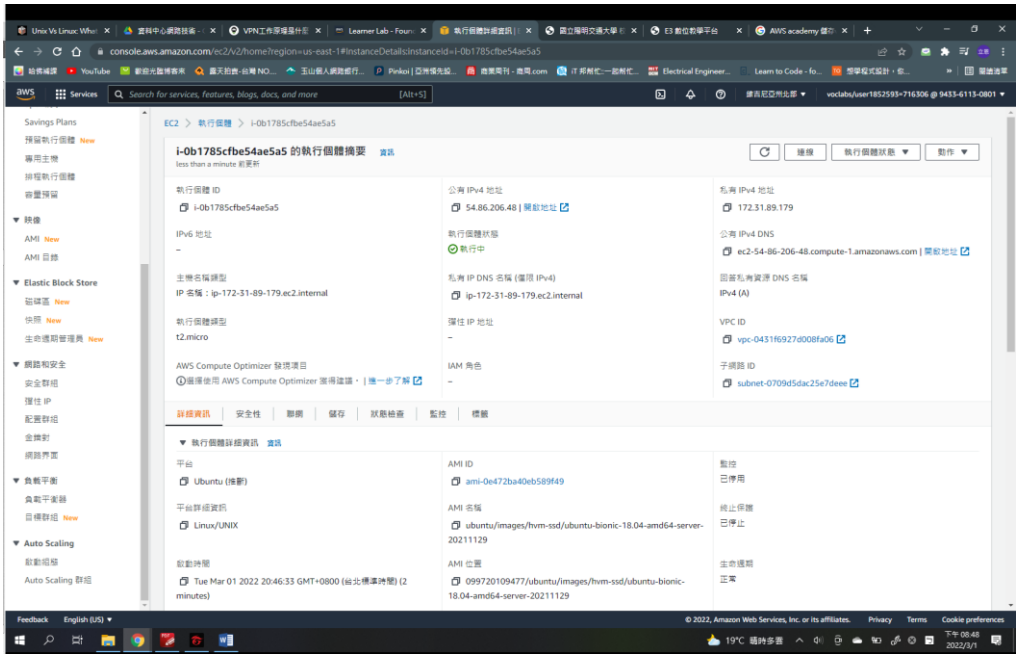


下圖可看到 VM instance 已啟動

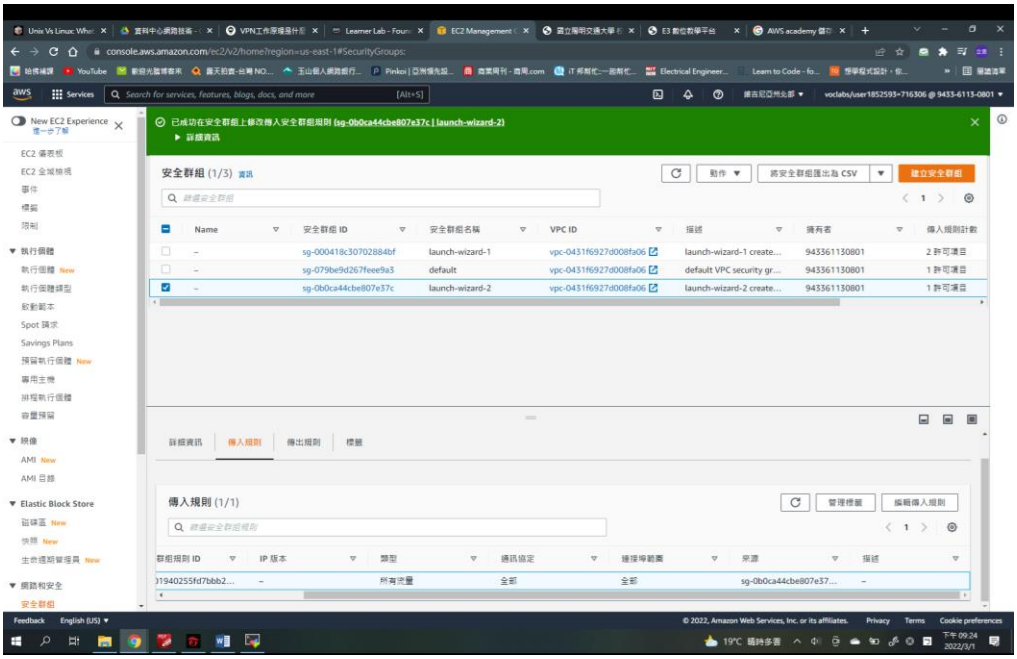


下圖為兩個VM 各自的資訊



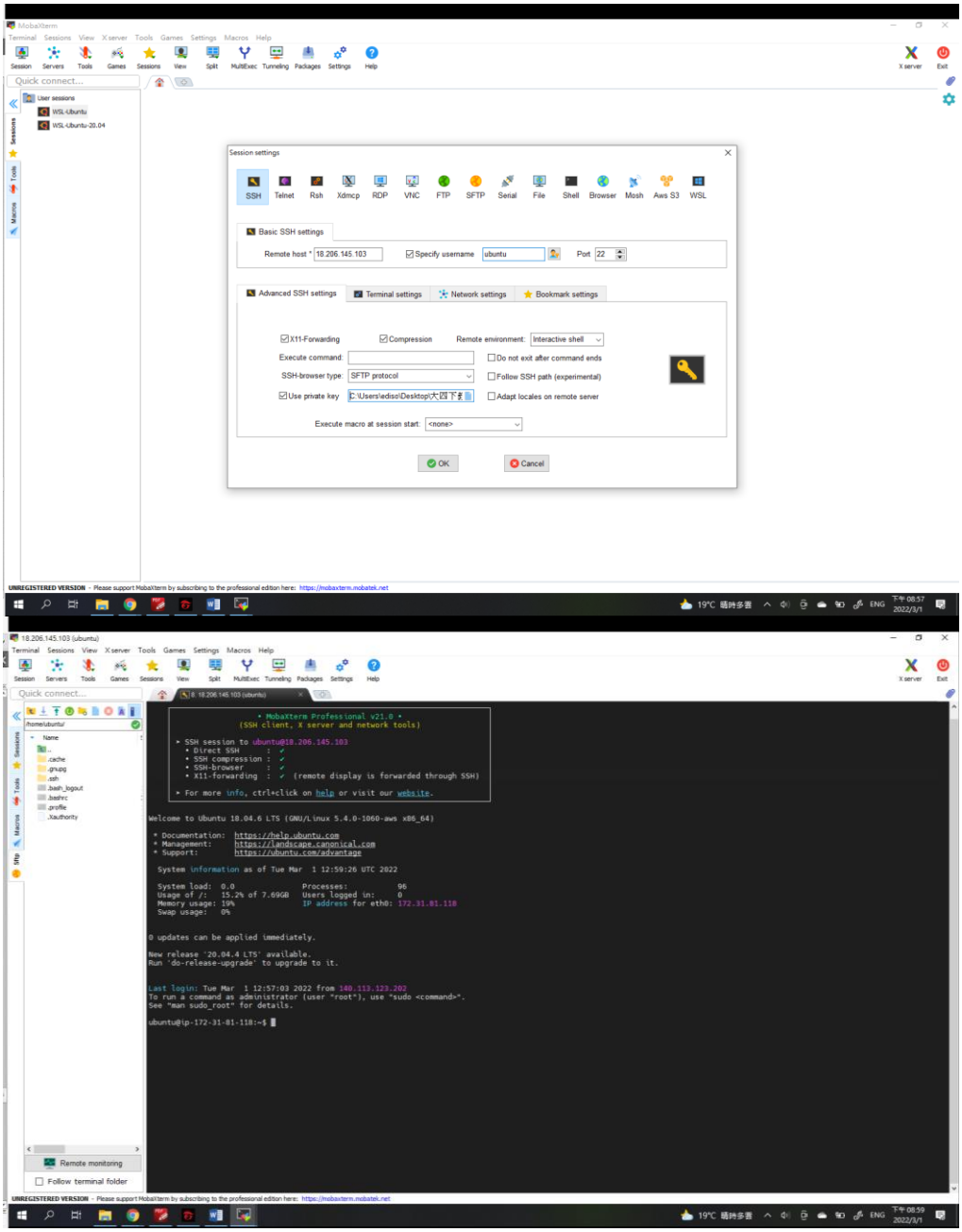


兩個 VM 使用相同的安全群組，故在此安全群組裡增加 inbound rule，使兩個 VM 之間的 socket 可以建立

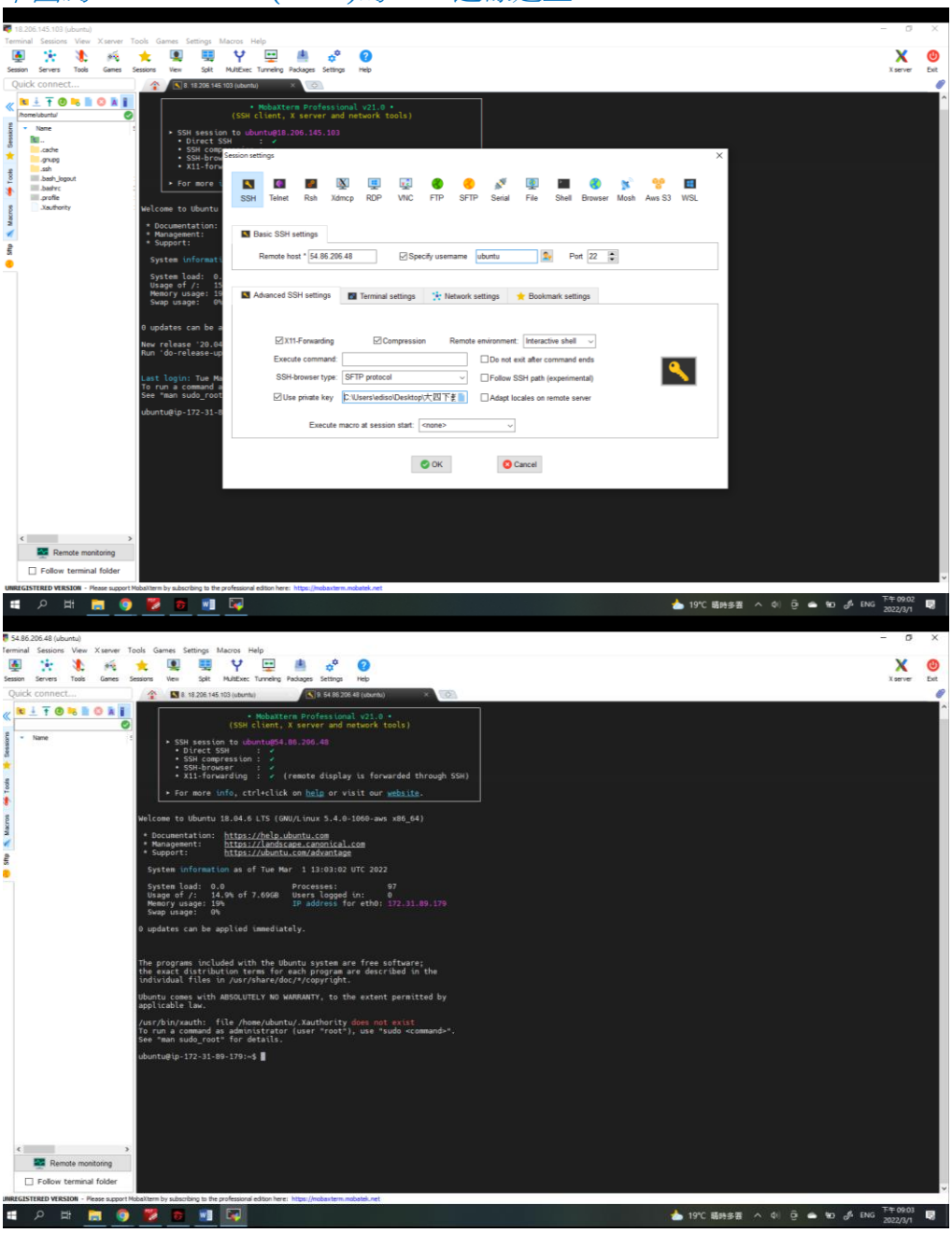


之後會以 172.31.89.179 作為 client 並以 172.31.81.118 作為 server
首先用 MobaXterm 連上兩個 VM，開兩個 SSH session 並使用各自的 public IP (我這裡的.pem 是用之前測試其他 VM 時建立的，但還是可以繼續沿用)

下圖為 172.31.81.118(server)的 SSH 連線建立

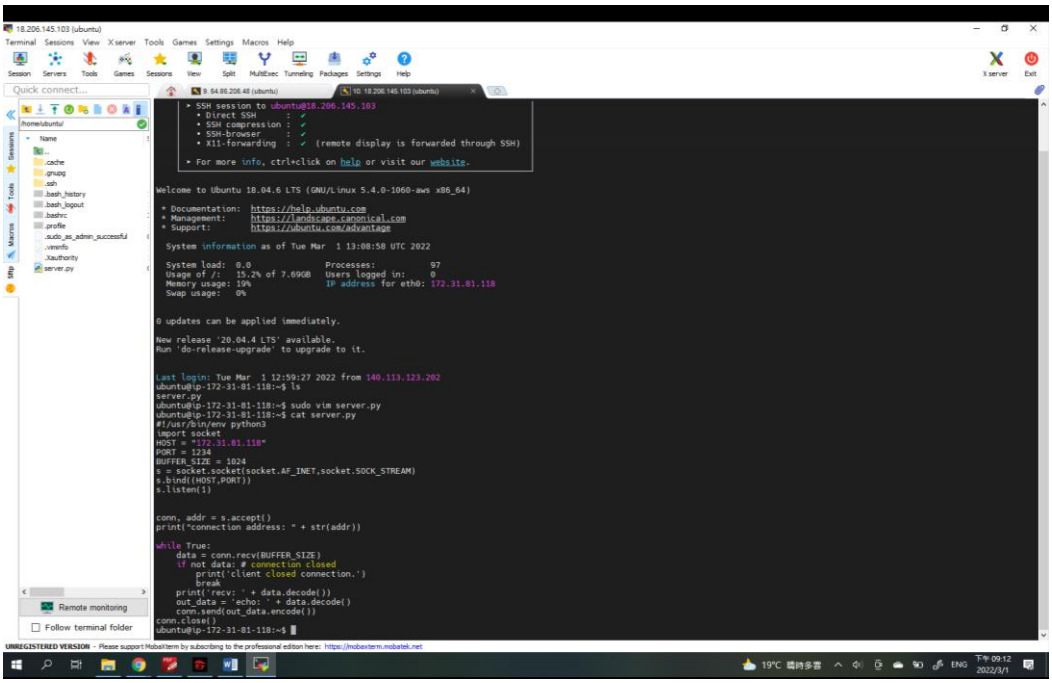

MobaXterm
Session settings
SSH
Telnet
Rsh
Xdmcp
RDP
VNC
FTP
SFTP
Serial
File
Shell
Browser
Mosh
Aws S3
WSL
Basic SSH settings
Remote host * 18.206.145.103
Specify username ubuntu
Port 22
Advanced SSH settings
Terminal settings
Network settings
Bookmark settings
X11-Forwarding
Compression
Remote environment: Interactive shell
Execute command:
Do not exit after command ends
SSH-browser type: SFTP protocol
Follow SSH path (experimental)
Use private key
Adapt locales on remote server
Execute macro at session start: <none>
OK
Cancel
UNREGISTERED VERSION - Please support MobaXterm by subscribing to the professional edition here: https://mobaxterm.mobatek.net
18.206.145.103 (ubuntu)
• MobaXterm Professional v21.0 •
(SSH client, X server and network tools)
• SSH session to ubuntu@18.206.145.103
• Direct SSH : ✓
• SSH compression : ✓
• SSH-browser : ✓
• X11-forwarding : ✓ (remote display is forwarded through SSH)
• For more info, ctrl+click on help or visit our website.
Welcome to Ubuntu 18.04.6 LTS (GNU/Linux 5.4.0-1060-aws x86_64)
* Documentation: https://help.ubuntu.com
* Management: https://landscape.canonical.com
* Support: https://ubuntu.com/advantage
System information as of Tue Mar 1 12:59:26 UTC 2022
System load: 0.0
Usage of /: 15.2% of 7.69GB
Memory usage: 19%
Swap usage: 0%
Processes: 96
Users logged in: 0
IP address for eth0: 172.31.81.118
0 updates can be applied immediately.
New release '20.04.4 LTS' available.
Run 'do-release-upgrade' to upgrade to it.
Last login: Tue Mar 1 12:57:03 2022 from 140.113.123.202
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
ubuntu@ip-172-31-81-118:~$
Remote monitoring
Follow terminal folder

下圖為 172.31.89.179(client)的 SSH 連線建立

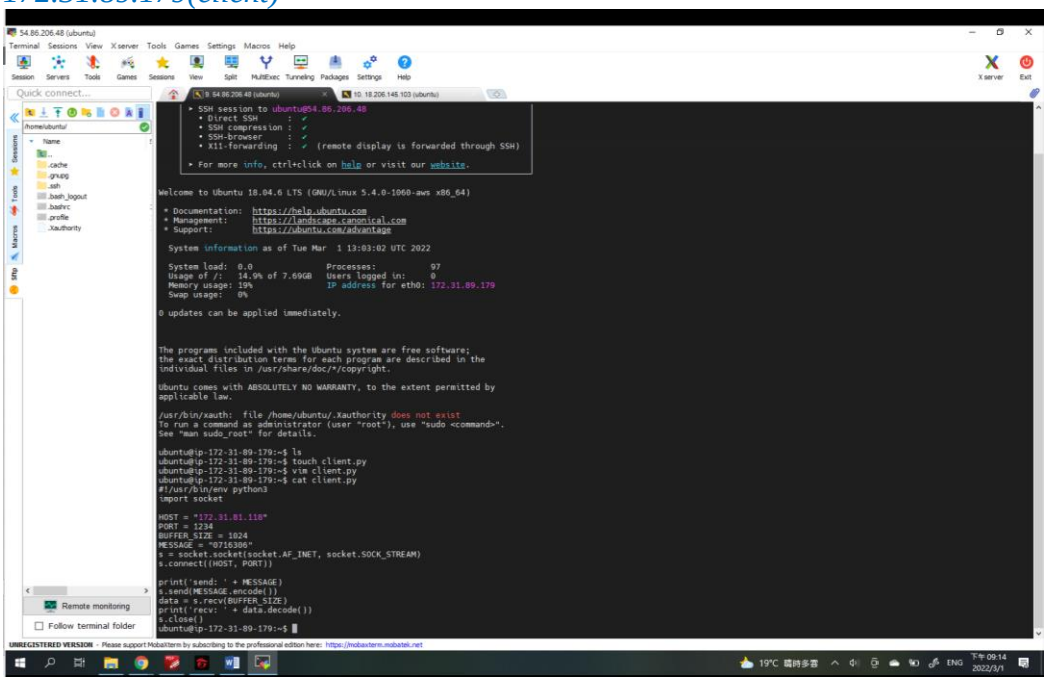


建立完成後，將 spec 中的 client.py 和 server.py 各自放進 VM 中，如下圖

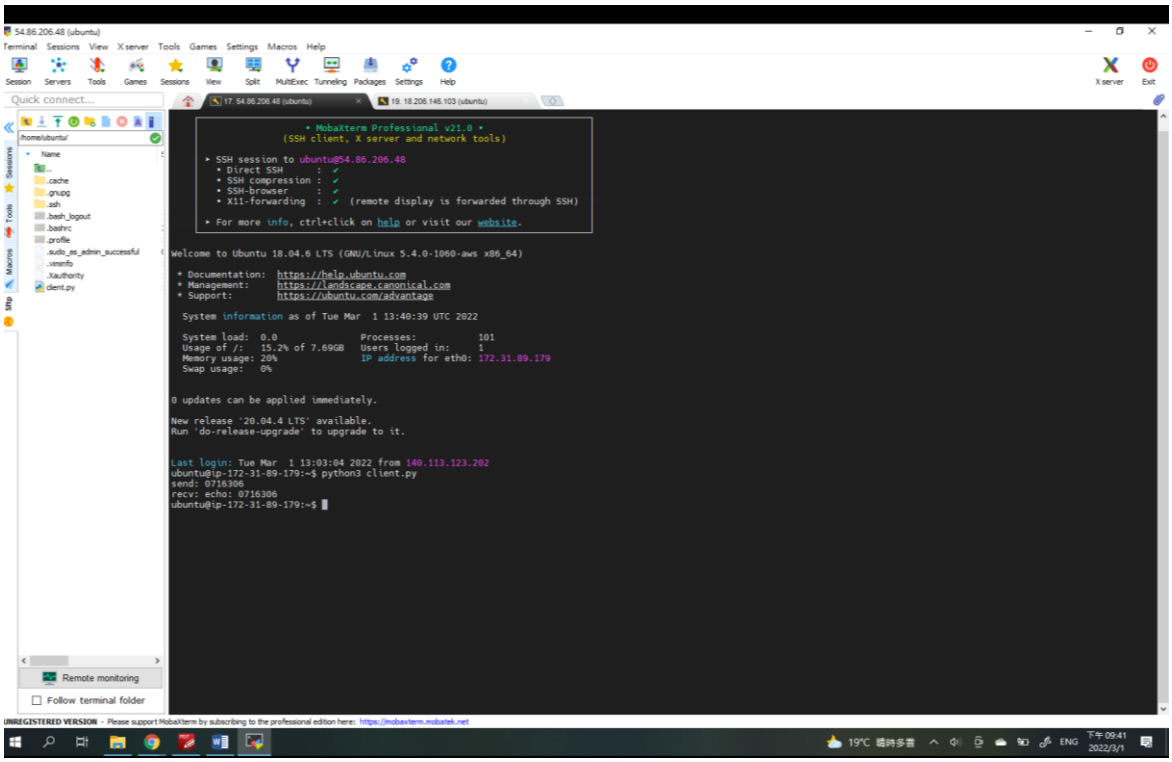
172.31.81.118(server)



172.31.89.179(client)



先啟動 server 端後再啟動 client 端，接著可以看到 output 如下(因為第一次測試時發現沒有設定安全群組的 rule，因此有重開過 session)



Thoughts & Comments

我覺得這次的 lab 讓我們有機會可以碰到平常沒辦法接觸的 AWS academy，因為之前做過很多實作課程，也接觸過很多軟體，因此第一次做這個 lab 一帆風順時總感覺好像還有很多東西不懂，於是又從頭做了一次，然後就和以往的實作課程一樣，發現很多有趣的東西，比如可以持續使用相同的 pem file、VM 的安全群組可以變更。

所以雖然說這個 lab 只要看著 spec 做一定很快就做出來，但自己可以趁機會摸索 AWS academy 才是有真正把 lab0 的東西學會