Module 0 Checkpoint
Getting Started with Logging onto CS Servers

What to submit?

Please submit a document in the form of .doc/.docx/.pdf to Moodle, with the required TWO screen captures for Task 2.

Task 1:

In order to log in computers in our (a) student labs (b) the academy servers (c) X2Go server, you are required to obtain a CS computer account.

To get one, please visit our CS homepage (http://www.cs.hku.hk)

1. Click "Intranet".
2. Click "New Student".
3. Log in using your HKU Portal account.
4. After approval, you should be able to see your CS username, password and a door PIN (for accessing nonpublic CS labs) on the page.

In the document that you will submit, please include your CS username.

Task 2:

Note: you would not be able to finish this task if you could not obtain your CS computer account from **Task 1**.

For learning purposes, you should remote access the Ubuntu Linux server (i.e., the academy server) in CS department via SSH (without GUI) and SFTP. Please follow the procedures below to connect to the Linux server in the CS department.

SSH

SSH provides you with a command-line user-interface to interact with the remote computer. The academy servers in our CS department can be accessed by using an SSH connection. The hostnames are **academy11.cs.hku.hk and academy21.cs.hku.hk**. However, they do not allow direct access from a computer outside the CS Network. If you are connecting the server from outside the CS network (e.g. at home), you can follow the procedures below to first connect to **gatekeeper.cs.hku.hk** and then connect to **academy11.cs.hku.hk** or **academy21.cs.hku.hk.**

Most of the operating systems come with SSH clients. You may use Command Prompt or Windows PowerShell in Windows 10/11 or Terminal in macOS. The following procedures apply to the SSH clients mentioned above. If you are using Windows 10, update the OS to the latest version to obtain the SSH feature. For older versions of Windows, third-party SSH client such as PuTTY (https://www.putty.org/) can be used.

1. Open an SSH Client (Command Prompt or Windows PowerShell or Terminal).

```
Microsoft Windows [Version 10.0.22621.2134]
(c) Microsoft Corporation. All rights reserved.

C:\Users>_
```

2. Enter "ssh *cs_account*@gatekeeper.cs.hku.hk" (where *cs_account* is your CS computer account) and then enter the password. When typing your password, it is normal that your password is not being shown. Press Enter when finished typing.

```
C:\Users>ssh twchim@gatekeeper.cs.hku.hk
twchim@gatekeeper.cs.hku.hk's password:
```

Password will NOT be shown when typing

After logging in to gatekeeper, you should see @gatekeeper in the last line.

```
C:\Users>ssh twchim@gatekeeper.cs.hku.hk
twchim@gatekeeper.cs.hku.hk's password:
Last login: Fri Sep  1 13:26:54 2023 from 10.64.193.57


----------------------------------------------------------------------
**************************** gatekeeper ********************************
You may also ssh to gatekeeper2.cs.hku.hk from the Internet.
----------------------------------------------------------------------
You may also use HKUVPN to access computing facilities of the CS department.
See https://www.its.hku.hk/documentation/guide/network/remote/hkuvpn2fa
----------------------------------------------------------------------

twchim@gatekeeper:~$
```

3. Now, enter "ssh *cs_account*@academy11.cs.hku.hk" or
"ssh *cs_account*@academy21.cs.hku.hk" and then enter your password again.

```
--------------------------------------------------------------------------------
**************************** gatekeeper ****************************************
You may also ssh to gatekeeper2.cs.hku.hk from the Internet.
--------------------------------------------------------------------------------
You may also use HKUVPN to access computing facilities of the CS department.
See https://www.its.hku.hk/documentation/guide/network/remote/hkuvpn2fa
--------------------------------------------------------------------------------

twchim@gatekeeper:~$ ssh academy11.cs.hku.hk
twchim@academy11.cs.hku.hk's password:
```

4.   After login, it may ask you "Terminal type?". Just press Enter to bypass the message. Then, you should see you are logged in to the academy server (@academy11 is shown in the example below). Please ignore all upgrade messages as only the system administrator can launch any system upgrade.

```
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.4.0-155-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

  System information as of Fri Sep  1 13:27:04 HKT 2023

  System load:    0.03       Temperature:            65.0 C
  Usage of /home: unknown    Processes:              589
  Memory usage:   1%         Users logged in:        3
  Swap usage:     0%         IPv4 address for eth0:  147.8.178.21

 * Strictly confined Kubernetes makes edge and IoT secure. Learn how MicroK8s
   just raised the bar for easy, resilient and secure K8s cluster deployment.

   https://ubuntu.com/engage/secure-kubernetes-at-the-edge

  Get cloud support with Ubuntu Advantage Cloud Guest:
    http://www.ubuntu.com/business/services/cloud

68 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

New release '22.04.3 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

twchim@academy11:~$
```

5.   Done! **Try entering the first Linux command date, what can you see? Take a screenshot of your command-line window and attach it to the document.**

SFTP (Recommended for file transfers)

SFTP allows you to transfer files between your local computer and the remote server. The hostname of the academy server is **sftp://academy.cs.hku.hk**. Similar to SSH, it does not allow direct access from a computer outside the CS Network. If you are connecting the server from outside the CS network, you need to establish the HKUVPN connection first.

Prerequisites

If you are connecting from a computer outside the CS departmental network, you need to connect HKUVPN. The procedures to connect HKUVPN can be found at https://www.its.hku.hk/documentation/guide/network/remote/hkuvpn2fa

For any technical issue about connecting HKUVPN, you should contact HKU ITS (https://www.its.hku.hk/service-desk).

Please try using a SFTP client to access the academy server and take a screenshot of your home directory and attach it to the document. If you have no idea what a SFTP client is, please follow the procedures below to use FileZilla to access the server.

Using FileZilla to access to the academy server

The following procedures are based on using FileZilla but you are welcome to use other SFTP clients.

1. Download and install FileZilla Client
   - https://filezilla-project.org/
   - Please follow its procedures for installing FileZilla Client.
   - **Be careful:** The installer may include options for installing other sponsored software. Uncheck or decline them if you don't want to install those software.

2. Open FileZilla, fill in the following information and click "Quickconnect"
   - Host: sftp://academy.cs.hku.hk
   - Username: [your_CS_account]
   - Password: [your_CS_account_password]
   - Port: Leave it empty

3. After connection, the window on the right side shows your home directory on the academy server. You can now drag and drop files between your local computer and the server. If the connection fails, check if you have connected to HKUVPN.
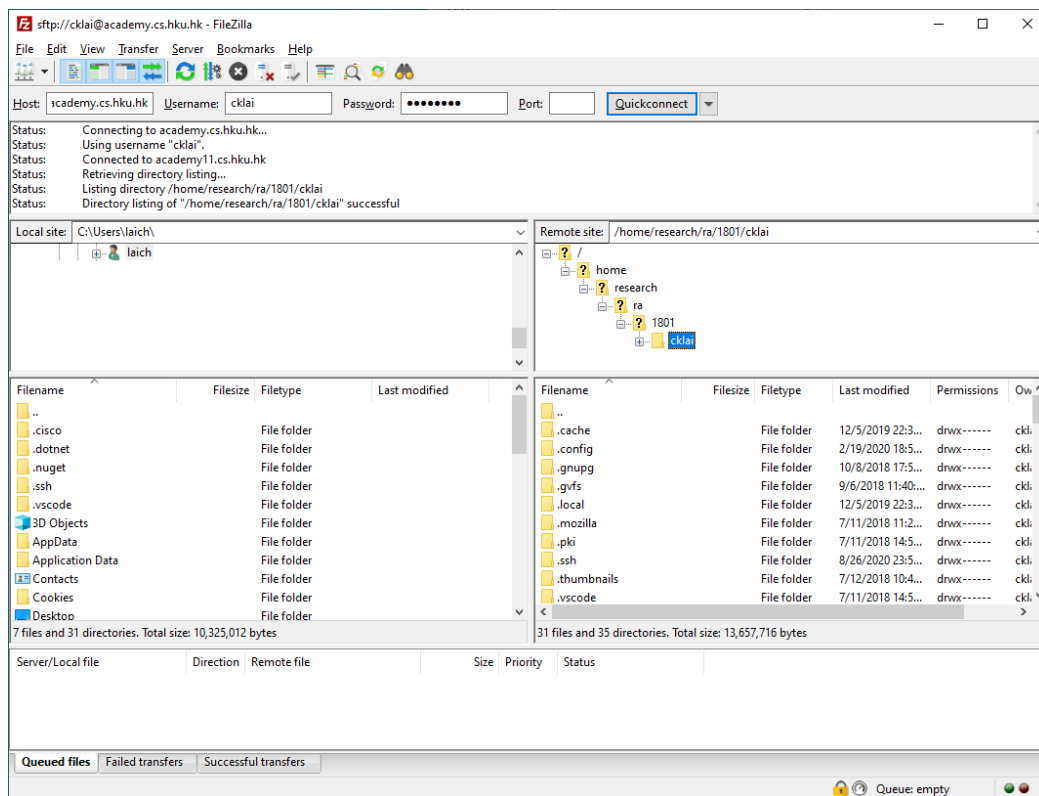
Do not forget to take a screenshot of your home directory and attach it to the document.

This checkpoint serves to make sure that you can get access to the CS servers, which would be the major environment that you will be working in for this course. You will learn more about the Linux environment in the next two modules.