

# CITS4407 Open Source Tools and Scripting

## Semester 1, 2021

### Accessing Linux

## Contents

1. Accessing a Linux environment – available options	1
2. For face-to-face students – accessing a Linux environment	2
3. For online students – accessing a Linux environment	2
4. On a Windows 10 laptop or home PC – installing Ubuntu 20.04	3
5. On a MacOS X laptop or home PC – installing Ubuntu 20.04	4

## 1. Accessing a Linux environment – available options

Regardless of whether you're doing this unit online, or face-to-face, you have two options for accessing a Linux environment:

1. You can install a Linux virtual environment on your own laptop or desktop computer,  
or
2. You can use a university computer.

However, currently the University computers are running a *different distribution and version* of Linux to the one we will be testing assignments on. To re-cap from the lectures:

- Assignments will be tested on an Ubuntu version 20.04 Linux environment.

Whereas, if you set up a Linux environment on your own computer, you can install Ubuntu 20.04, and know that it's exactly the same environment markers will be testing your assignment on. So if you *can* go with option (1), it might be a good idea. If you can't – just use the University's Linux environment, and we will make sure that you do have some way of accessing Ubuntu 20.04 by the time you're working on the first assignment.

## 2. For face-to-face students – accessing a Linux environment

If you are attending a workshop face-to-face: all the computers in the labs we will be using *dual-boot* into Windows and Linux – that is, when the computer is powered on, it will give you a choice of which operating system to use.

To access the Linux environment:

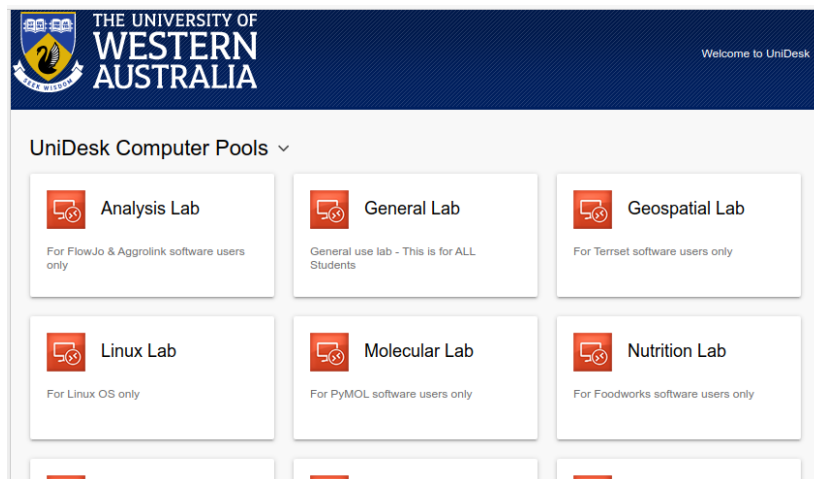
- Re-start the machine – from the Windows logon screen, there should be a button in the lower right of the screen which gives you the option to re-start.
- As the machine is re-starting, you should see a text menu displayed which offers “Windows” and “Linux” options. Use the keyboard arrows to select “Linux”, and hit “enter”.
- A login screen should eventually be displayed – you can log in using your student number and PHEME password.

## 3. For online students – accessing a Linux environment

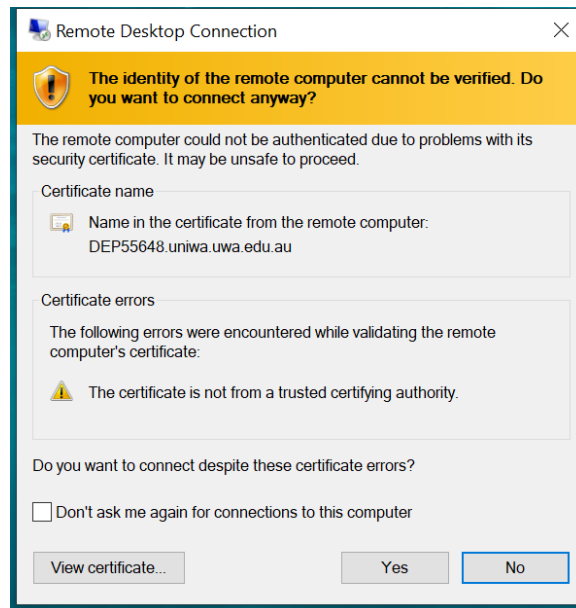
If you are attending a lab *online*, UWA IT’s recommended way of accessing a lab computer is to use **Unidesk**.

- Visit the Unidesk site at <https://unidesk.uwa.edu.au/>

You should see a web page like the one below:



- Click on “Linux Lab”.
- You may see a message asking if you want to download or open a file called “launch9456a51b.rdp” or similar – click “open”.
- You may see an alert asking whether you want to connect (see below) – click “Yes.”



- If asked for a user ID and password to log on with, use your student ID (just the number – no @student.uwa.edu.au is required), and your normal PHEME password.
- You should then be connected to a UWA linux lab computer. In the event of any difficulties – it is UWA IT that supports the Unidesk system, so you should contact the UWA Service Desk by calling tel. +61 8 6488 1234 (or extension x1234 if on campus), between 8.00am and 5:00pm weekdays – see the [Service Desk](#) page for more details.

## 4. On a Windows 10 laptop or home PC – installing Ubuntu 20.04

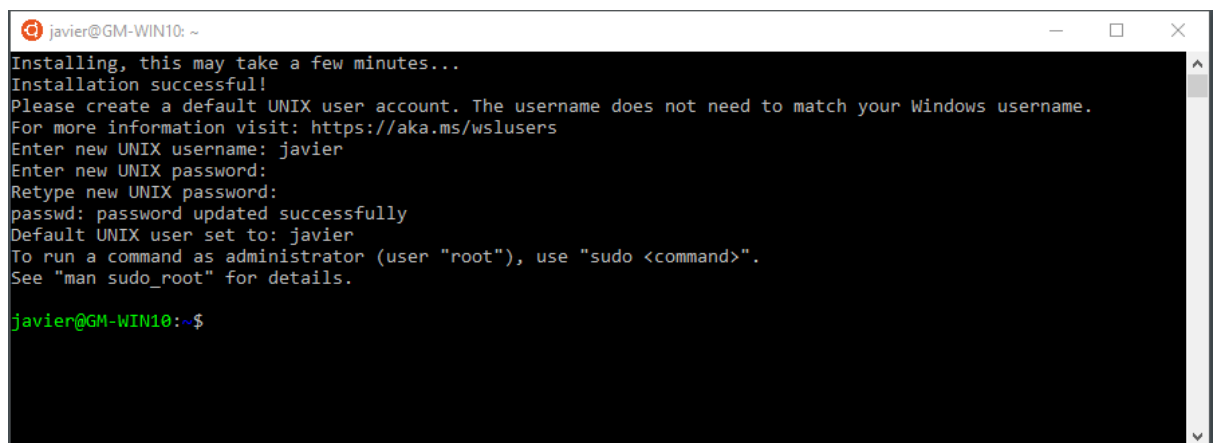
This should be the easiest way of accessing a Linux environment for most students.

1. Ensure your computer is up to date – that any Windows updates have been applied.
2. Inside the search field on the taskbar (towards the left of the taskbar), type the word “powershell”.  
Windows should display a search result labelled “Windows PowerShell”.
3. Right-click on that result, and then click “Run as administrator.”
4. A terminal window should appear. Copy the following text, paste it into the terminal window, and hit “enter”:

```
dism.exe /online /enable-feature /featurename:VirtualMachinePlatform  
/all /norestart
```

5. Restart your computer.
6. Type “store” in the search field on the taskbar, and click “Microsoft Store” from the result. Once the Store application opens, search for “Ubuntu 20.04”.  
(Alternatively, click [here](#) to bring up Ubuntu 20.04.)

7. Click on the Install button. Ubuntu 20.04 will be downloaded and installed automatically.
8. Type “ubuntu” in the search field on the taskbar, and click on the result that is displayed.  
When launched for the first time, you should see a message that Ubuntu is “Installing” and you’ll need to wait a short while until it’s done.
9. When installation is complete, you will be prompted for a username and password to be used by Ubuntu. These don’t need to be the same as your Windows 10 credentials. Once this is done, you should find a Bash command line prompt displayed.



```
javier@GM-WIN10: ~
Installing, this may take a few minutes...
Installation successful!
Please create a default UNIX user account. The username does not need to match your Windows username.
For more information visit: https://aka.ms/wslusers
Enter new UNIX username: javier
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Default UNIX user set to: javier
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
javier@GM-WIN10:~$
```

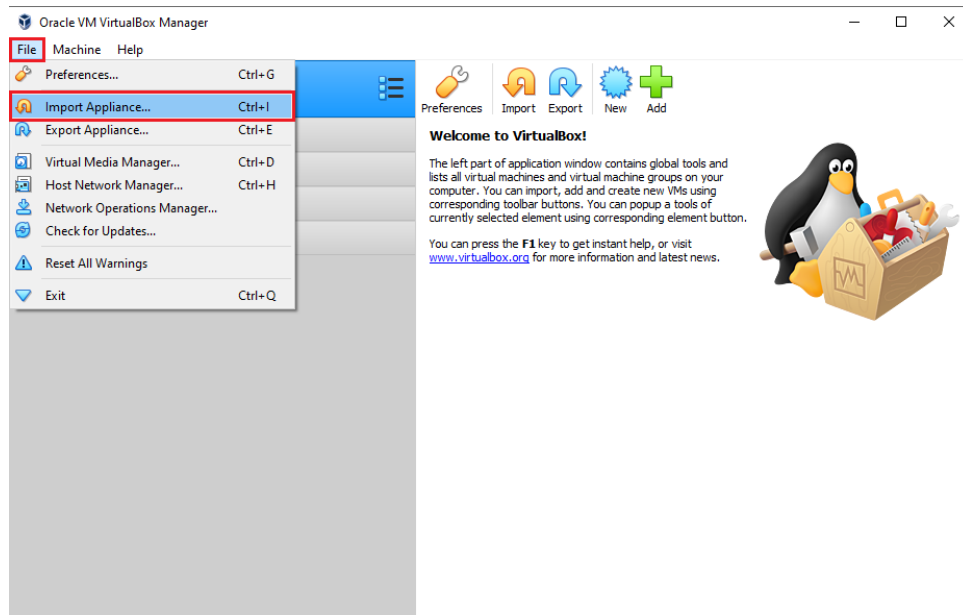
## 5. On a MacOS X laptop or home PC – installing Ubuntu 20.04

If you have access to a MacOS X laptop or home PC, our recommended method for accessing Linux is to use VirtualBox, free and open source software provided by Oracle.

You may decide to use other software (such as [Parallels Desktop](#) or [VMWare Workstation](#)), but we don’t provide installation instructions for those.

1. Visit the VirtualBox download page at <https://www.virtualbox.org/wiki/Downloads>. Under “VirtualBox 6.1.18 platform packages”, click “OS X hosts”, and download the file there to your computer.
2. Find the file you downloaded, and double-click on it to open it, and you’ll see a Finder window.  
The window should show an icon for VirtualBox, and an icon for your “Applications” folder.
3. Drag the VirtualBox icon into the folder icon.
4. Download the following file – it’s a zipped Ubuntu 20.04 virtual machine: [https://teaching.csse.uwa.edu.au/units/CITS4407/Ubuntu\\_20.04.2\\_VB.zip](https://teaching.csse.uwa.edu.au/units/CITS4407/Ubuntu_20.04.2_VB.zip)  
This may take a while to download.  
(If that link doesn’t work, try [this one](#).)

5. Go to your downloads directory (or wherever you saved the .zip file).  
Right-click on the file, and if you have WinZip or 7-Zip installed, you should see the option to “extract” files from the .zip file – click it.
6. Go to your Applications folder, and start the VirtualBox program.
7. In VirtualBox, go to “file” / “Import Appliance”



8. You will be stepped through the process of importing an Ubuntu virtual machine. click the “browse” icon button, and choose the .ova file extracted from the .zip file you downloaded.
9. Click “Open”.
10. Towards the bottom of the dialog box is a text box showing where this virtual machine will be installed – choose anywhere convient (such as your “Documents” folder), then click “Import”.
11. If asked to agree to any licensing terms, click “Agree”.
12. Wait for the import to complete – a progress bar is shown.
13. Once the import is complete, within VirtualBox you should see a new Ubuntu virtual machine listed. Click the green “Start” button to power on the virtual machine.
14. A window should pop up for the virtual machine, showing its progress in starting up.
15. Eventually, you will be prompted for a user ID and password: type “ubuntu” and “ubuntu” for these.
16. You should then be logged in to an Ubuntu 20.04 environment.
17. Look for the “Activities” menu, enter the word “terminal”, and click the found result to start a terminal running Bash.