LINUX SUBSYSTEM FOR WINDOWS
&
CIRCE LOGIN INSTRUCTIONS

OPERATING SYSTEM : WINDOWS

USF Genomics Program

USF
UNIVERSITY OF
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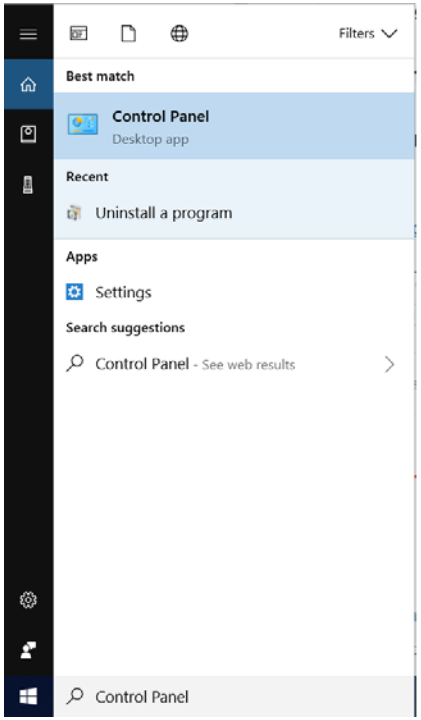
WINDOWS SUBSYSTEM FOR LINUX

- In recent versions of Windows 10, Microsoft has allowed users to install a beta version of a bash shell via Ubuntu, OpenSUSE, Debian GNU/Linux and Kali Linux. .
- The Windows Subsystem for Linux is a stripped-down version of Linux that runs within Windows 10.
- This system lets users run bash commands like grep, sed and awk, as well as bash scripts and Linux command-line applications like vim, emacs and tmux.

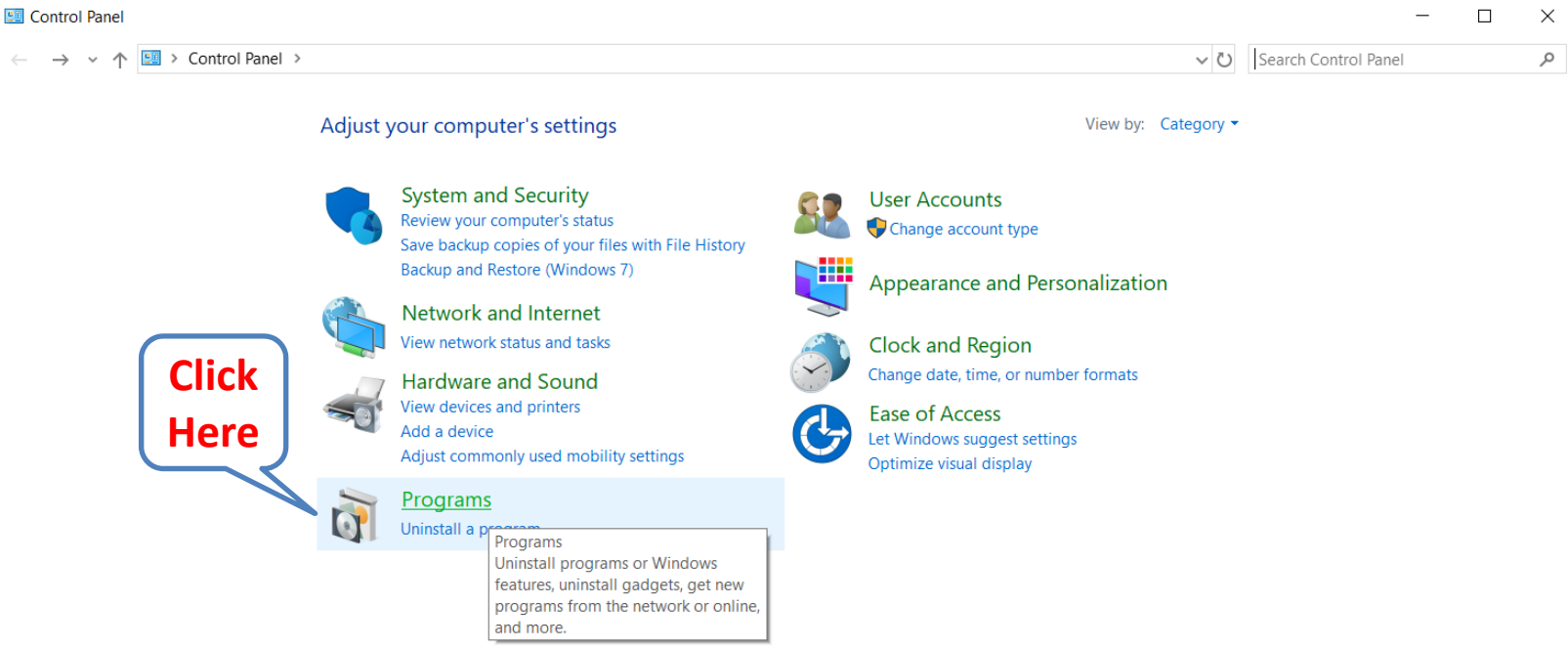
TURN ON THE SUBSYSTEM

- Before we can install Linux subsystem on your Windows based PC, this feature has to be turned on from the Control Panel.



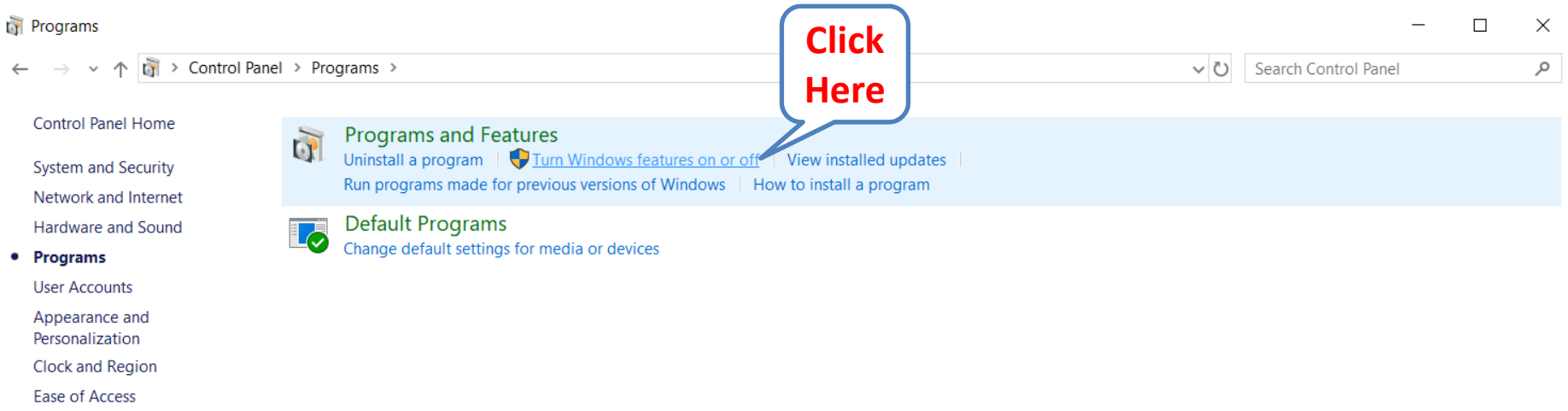
TURN ON THE SUBSYSTEM

- Once in the “Control Panel” window opens, click on Programs.



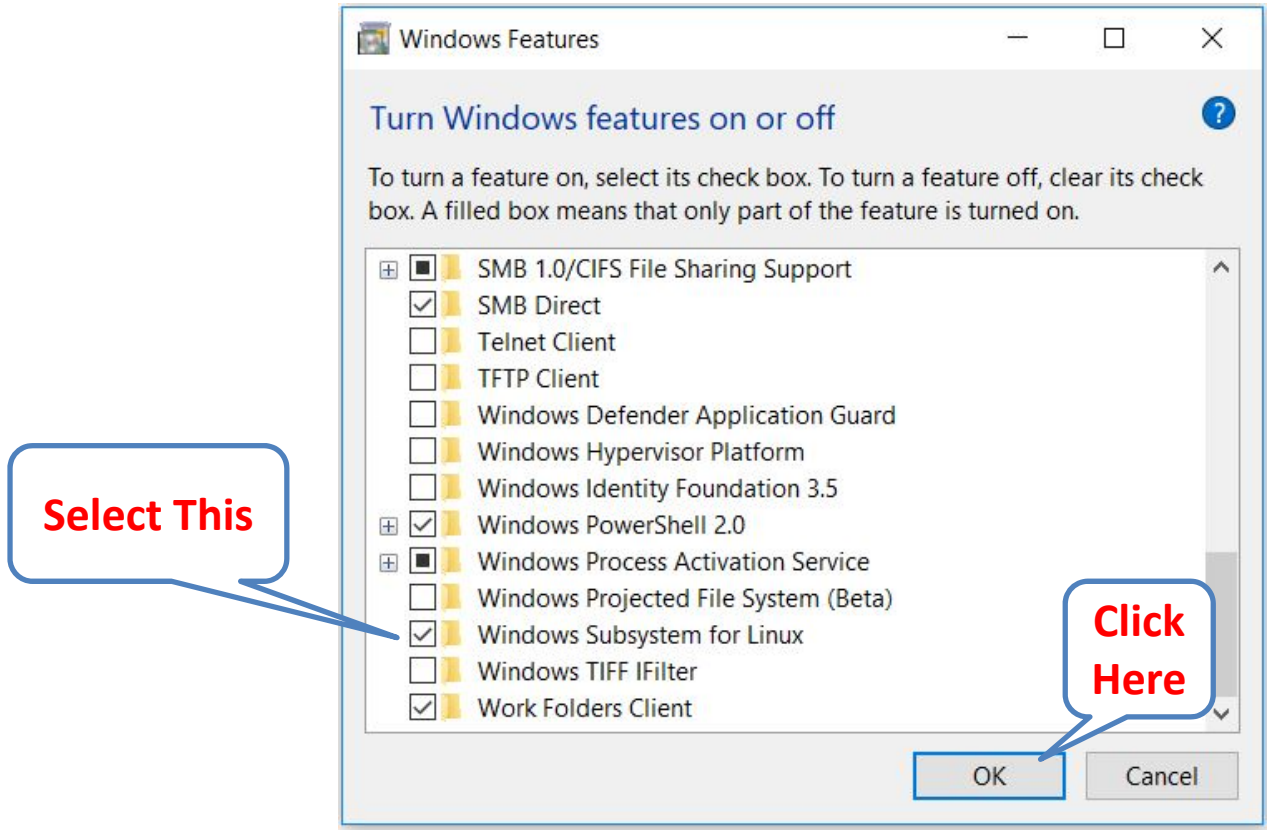
TURN ON THE SUBSYSTEM

- Under the “**Programs and Feature”** section, click on ‘Turn Windows features on or off’. This would open a pop-up window.



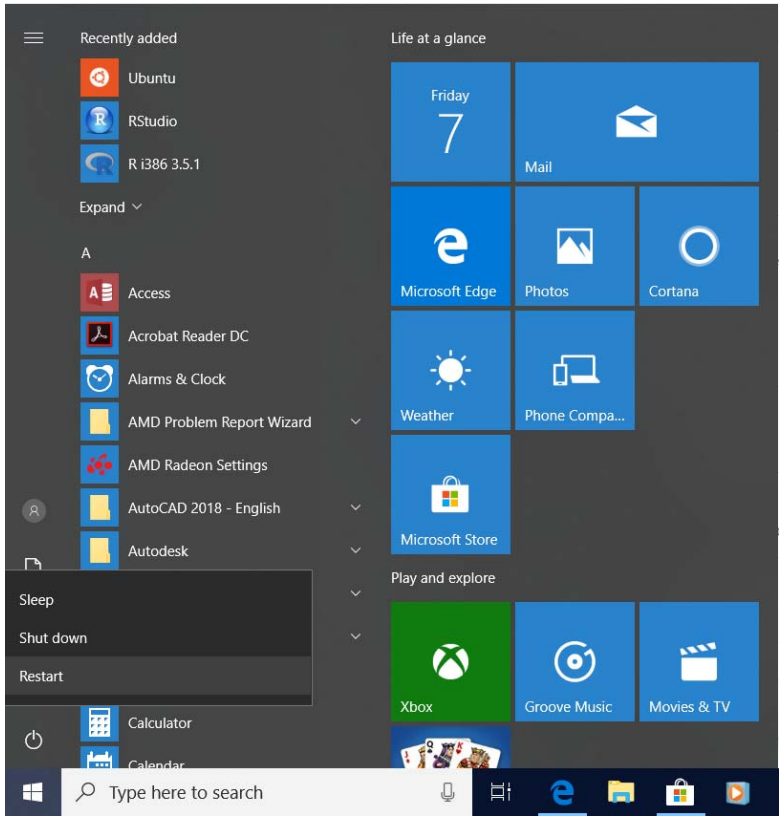
TURN ON THE SUBSYSTEM

- In the pop-up "**Windows Features**" window, scroll all the way down to find "Windows Subsystem for Linux". Select it's check box and click **Ok**.



TURN ON THE SUBSYSTEM

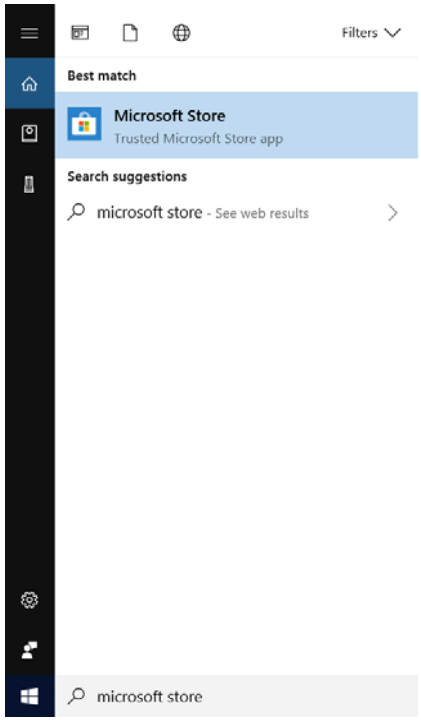
- Click “**Restart now**” when you’re prompted to restart your computer. The feature won’t work until you reboot.
- If the prompt doesn't appear go to the windows start menu and click “**Restart**”.

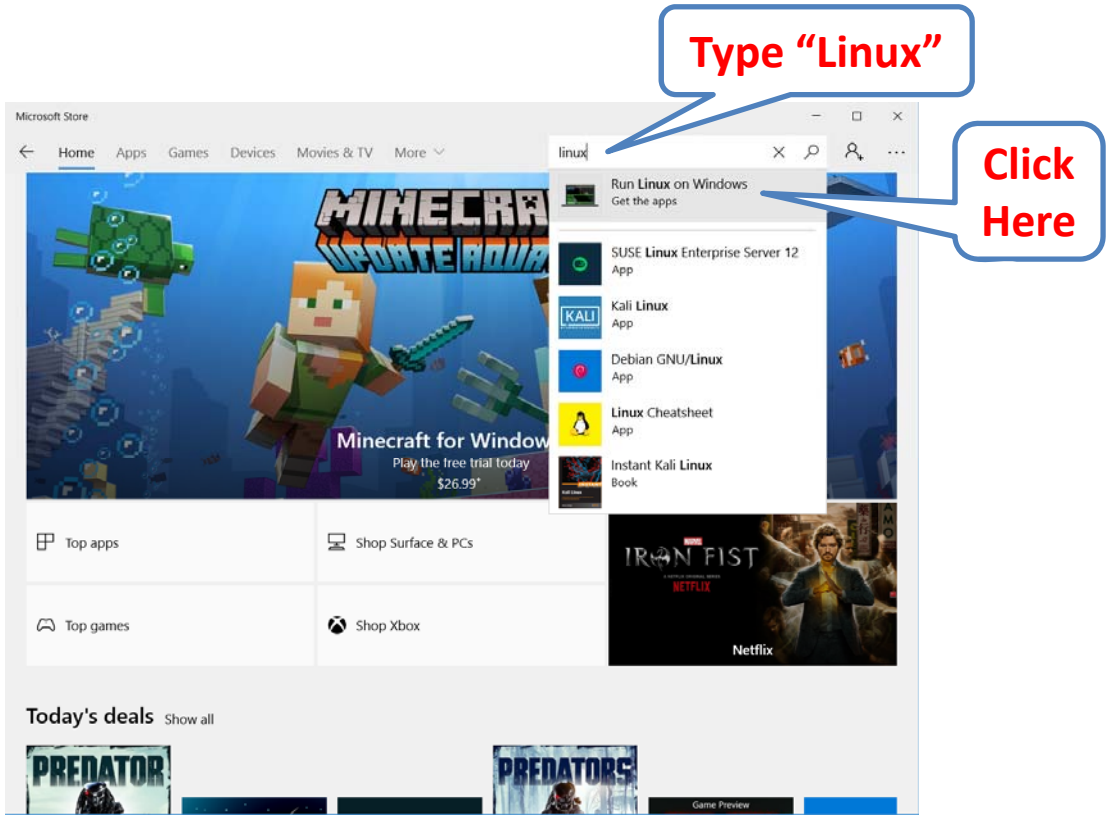


Click here to restart the Operating System.

INSTALL LINUX DISTRO FROM THE WINDOWS STORE

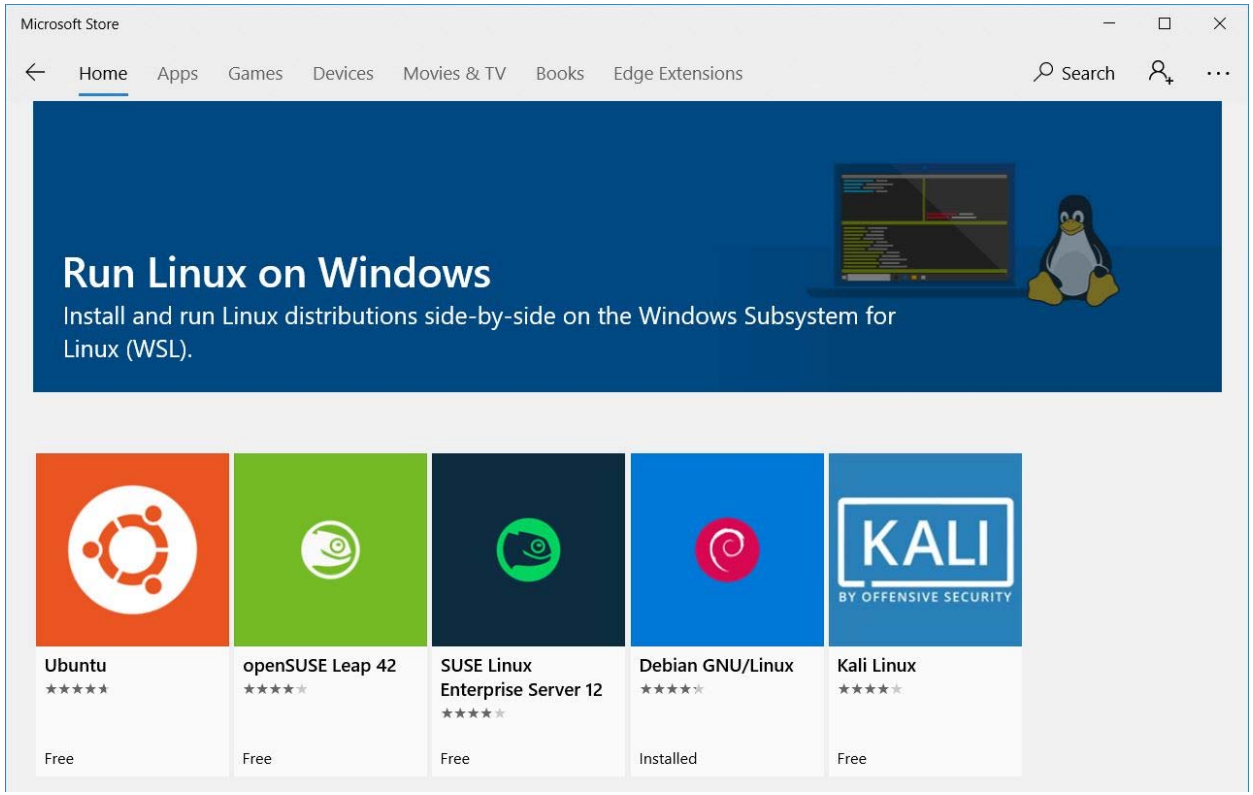
- After your computer restarts, open the Microsoft Store from the Start menu, and search for “Linux” in the store. Click “Run Linux on Windows Get the apps”.





INSTALL LINUX DISTRO FROM THE WINDOWS STORE

- You'll see a list of every Linux distribution currently available in the Windows Store.
- To install a Linux distribution, click it, and then click the "Get" or "Install" button to install it like any other Store application.



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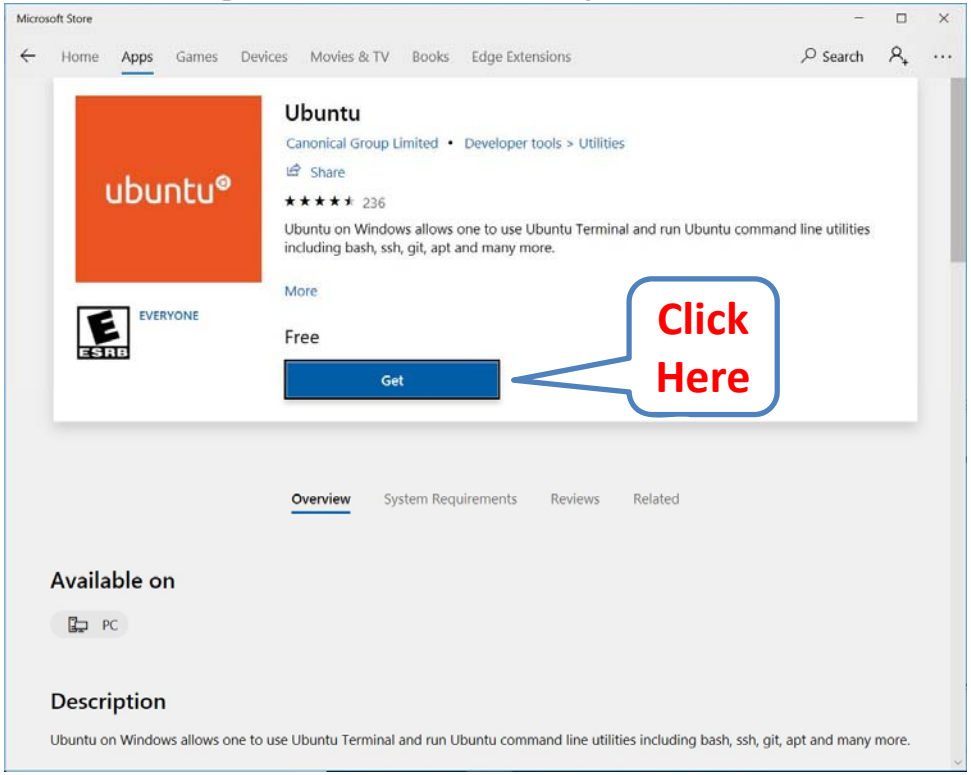
A BRIEF INTRO OF UBUNTU

ubuntu

- Ubuntu is one of a number of Linux distributions.
- The source code that makes up the Ubuntu Linux distribution originates from another, much older Linux distribution known as Debian.
- Ubuntu was conceived in 2004 by Mark Shuttleworth and his company Canonical.
- The word "Ubuntu" is an ancient Zulu and Xhosa word which means "humanity to others".
- Ubuntu also means "I am what I am because of who we all are". It was chosen because these sentiments precisely describe the spirit of the Ubuntu Linux distribution.
- Canonical has been partnering with Microsoft since early 2016, to run Ubuntu simultaneously with Windows (This isn't a Virtual Machine).

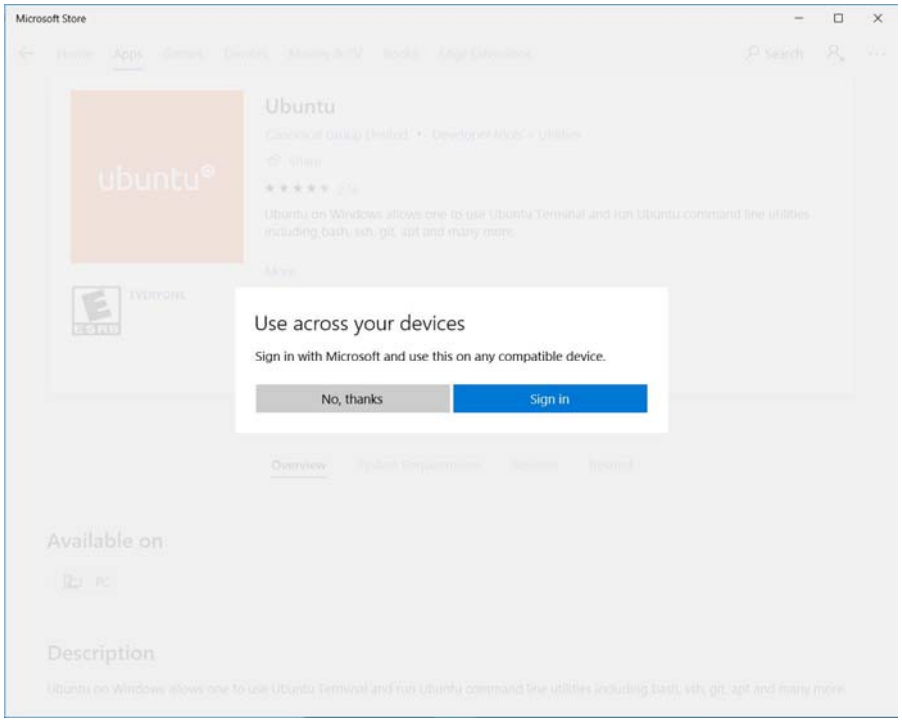
INSTALL UBUNTU FROM THE WINDOWS STORE

- If you're not sure which Linux environment to install, we recommend Ubuntu.
- You can also install multiple Linux distributions and run them in parallel in different windows.
- Each Linux distribution gets it's own unique shortcut.



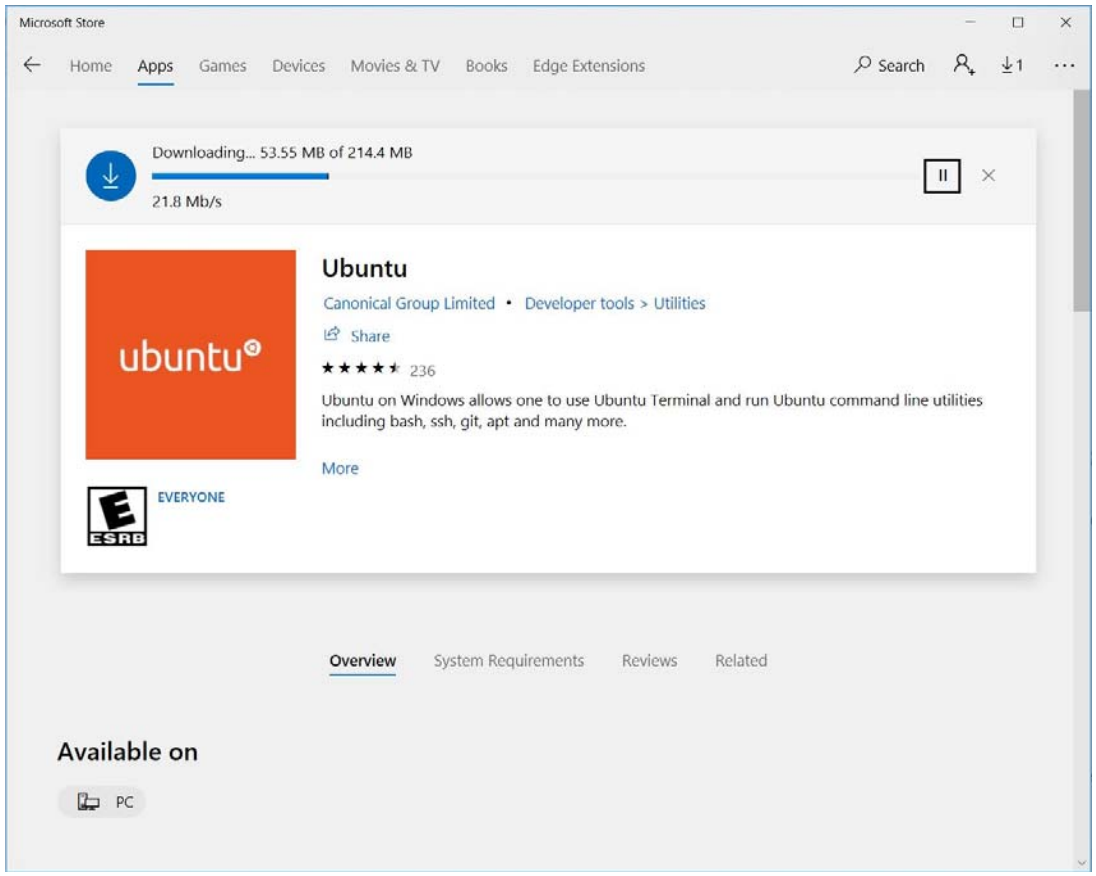
INSTALL UBUNTU FROM THE WINDOWS STORE

- You can continue by selecting either of the options.
- If you select “Sign in” option, you will be redirected to input your Microsoft account Username and password.



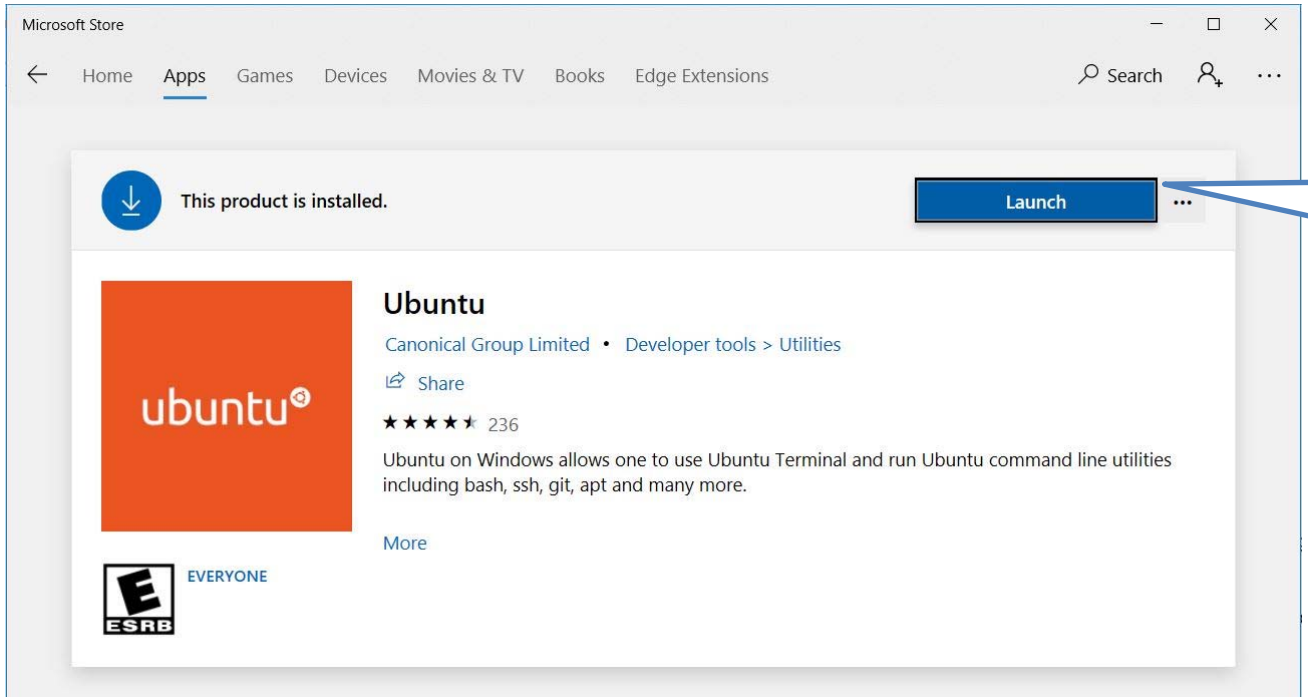
INSTALL UBUNTU FROM THE WINDOWS STORE

- It would take a few minutes to finish the Linux distribution (Ubuntu) download.



INSTALL UBUNTU FROM THE WINDOWS STORE

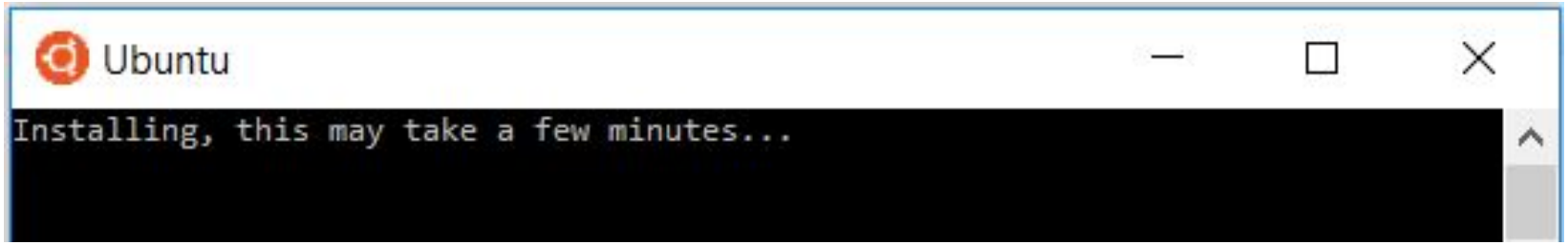
- Once the download is finished, the app is automatically installed.
- You can launch the bash terminal by clicking the “Launch” button, as well as from the start menu by searching for “Ubuntu”.



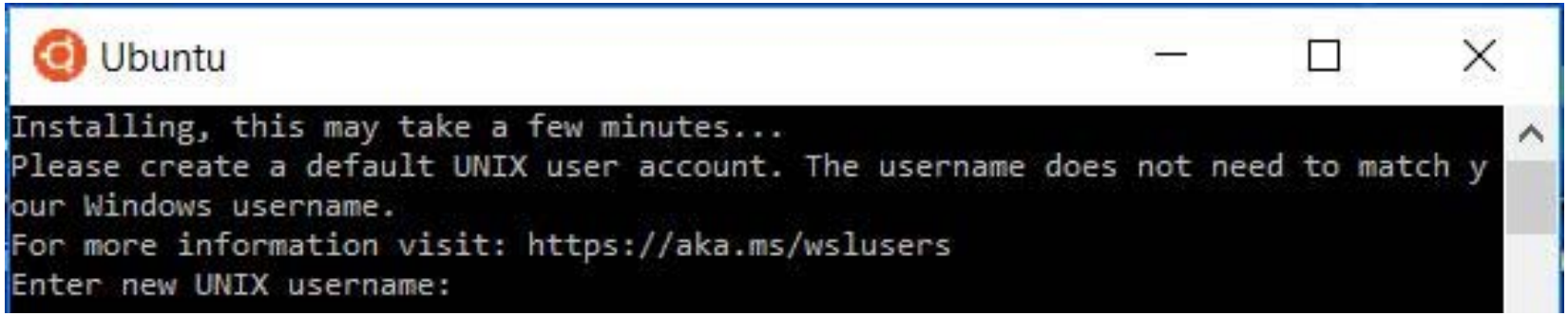
Click here to launch the bash terminal

LAUNCH AND RUN UBUNTU

- A pop-up "**Ubuntu**" window will appear, showing the progress of the installation. It would take few minutes for the installation to complete.

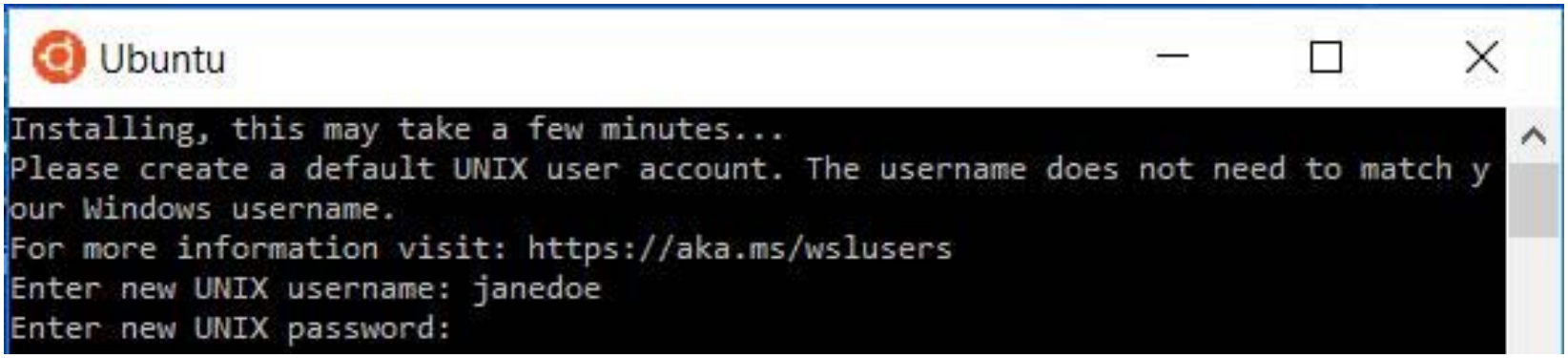


- First we have to assign a UNIX username.

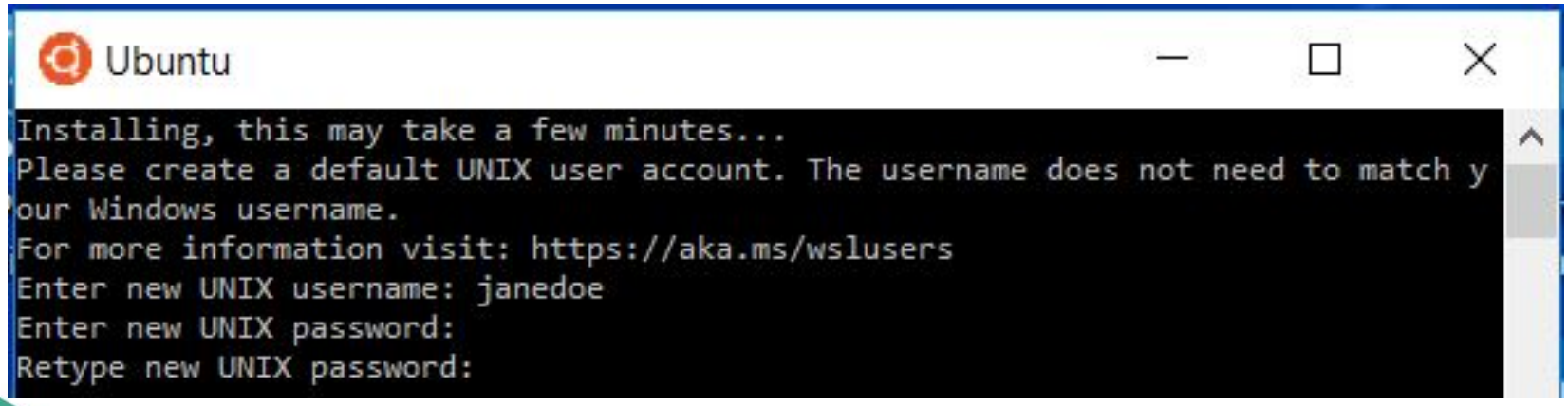


LAUNCH AND RUN UBUNTU

- For example here I used, "**janedoe".**

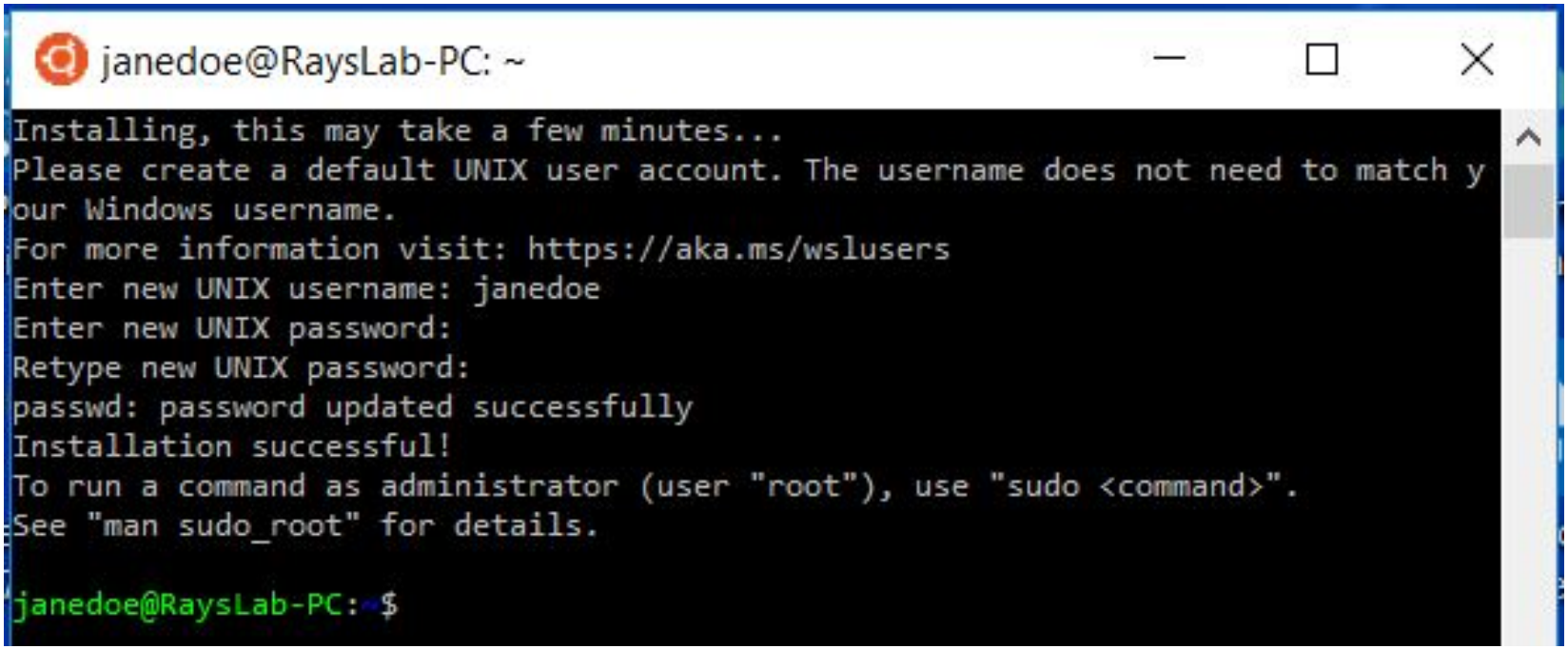


- You have to enter the password twice, this step is reduces typographic errors. This password can be different from your computer password.



LAUNCH AND RUN UBUNTU

- The Ubuntu installation on your Windows operating system is successful.



- You may proceed with connecting to CIRCE, the “Central Instructional and Research Computing Environment”, the high-performance computing infrastructure provided by USF Research Computing for all faculty, students, staff, and partners.

CONNECTING VIA SECURE SHELL (SSH)

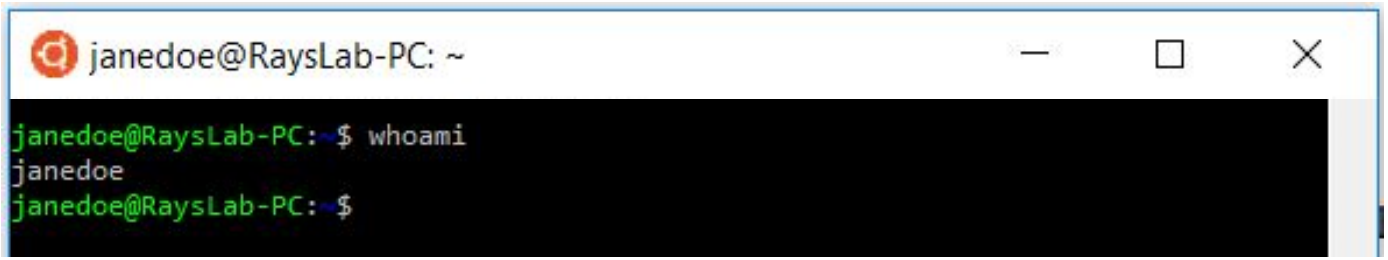
Step1. Launch the Ubuntu bash terminal, from the start menu.

Let's catchup with a basic command:

'whoami' - The command writes user name of the owner of the current login session.

```
username$  whoami
username
```

Here the username is 'janedoe'



CONNECTING VIA SECURE SHELL (SSH)

Step 2. In order to utilize the computational resources offered by USF's Research Computing (RC) we use Secure Shell (SSH). Which offers a safe way to communicate with CIRCE or SC (Student Cluster) and to connect to systems remotely.

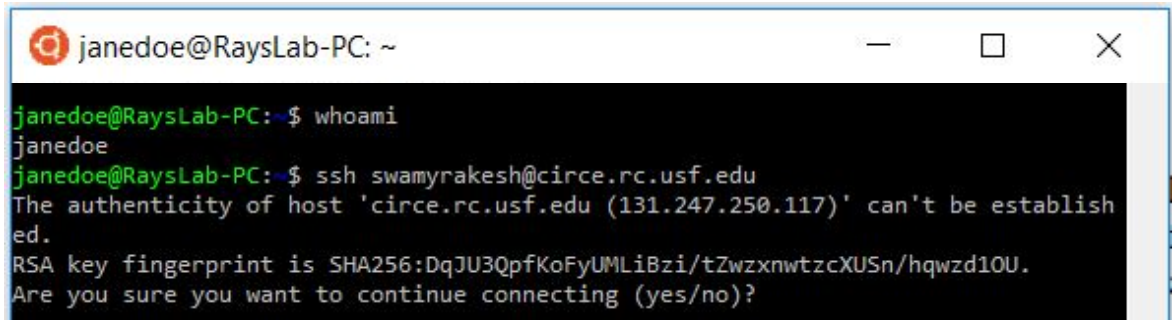
- The following information will be needed to connect to CIRCE via SSH:
  - User: (USF NetID)
  - Password: (USF NetID Password)
  - Hostname: **circe.rc.usf.edu** or **sc.rc.usf.edu**
  - SSH Port: 22 (This is the default)

Don't ever share your NetID password to anyone.
USF NetID passwords expire every 180 days.

Here

NetID – swamyrakesh #Use your NetID not mine..

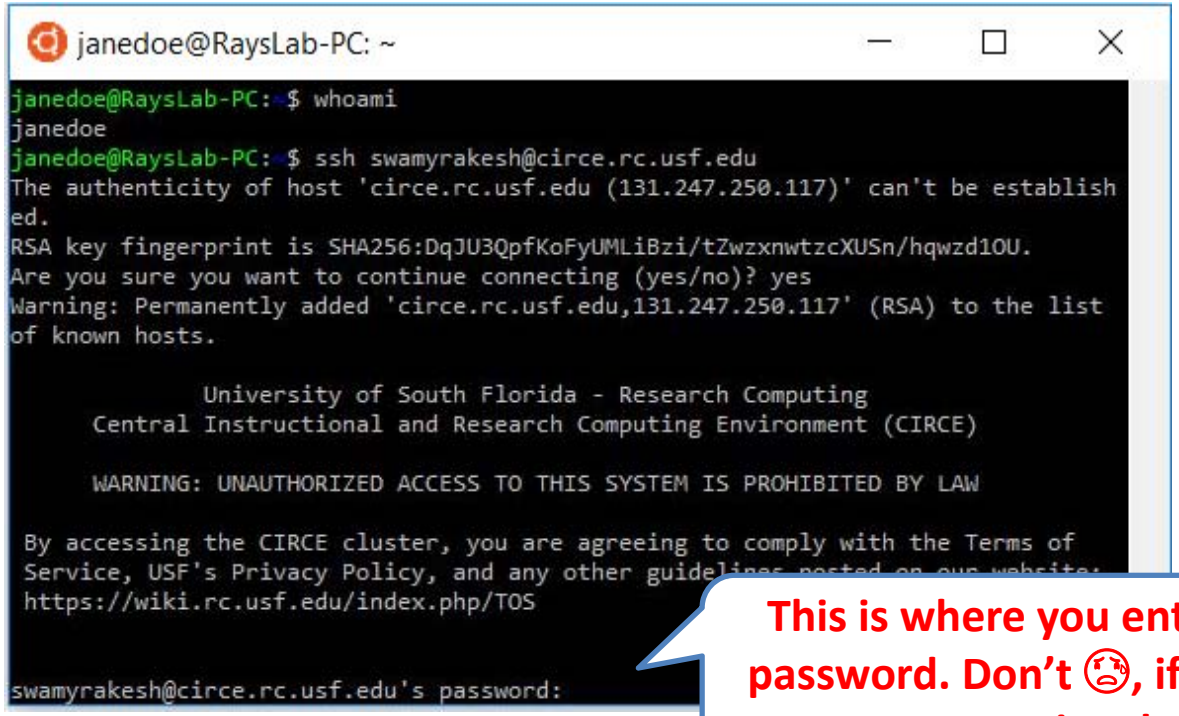
Hostname – circe.rc.usf.edu



CONNECTING VIA SECURE SHELL (SSH)

Step 3. Now you are establishing a connection to CIRCE, wherein we need our NetID password to authenticate the login.

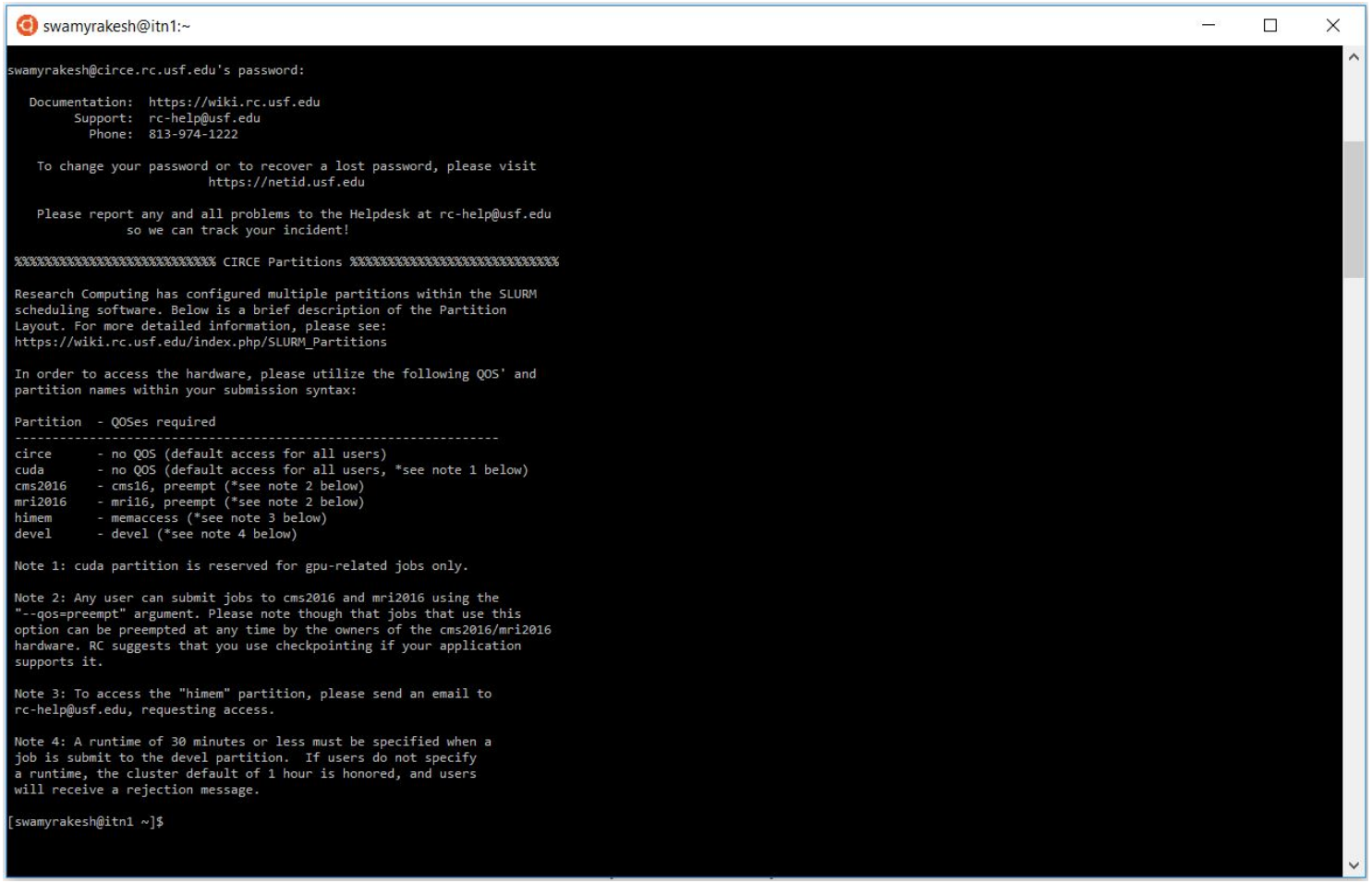
The password does not show up in the terminal when you type it, but that is for security reasons. Just try typing your password out, and hitting enter. If your password was entered correctly, the action will continue. If your password was spelled wrong, it will prompt you to enter it again.



This is where you enter your NetID password. Don't 😢, if the characters you are typing don't appear.

CONNECTING VIA SECURE SHELL (SSH)

- Step 4. Now you should see the following contents appearing on in your terminal if the login to CIRCE is successful.



REFERENCES

- https://docs.microsoft.com/en-us/windows/wsl/about
- https://wiki.rc.usf.edu/index.php/Main_Page

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