

Homework #0 – Introduction to Linux

Due date: see course website

Note: this assignment is adapted from ECE250 (Computer Architecture). If you've already completed this assignment in that class, you can review the training videos as a refresher, then proceed to the quiz questions directly. Note that unlike in ECE250, we will not be using the Docker container manager.

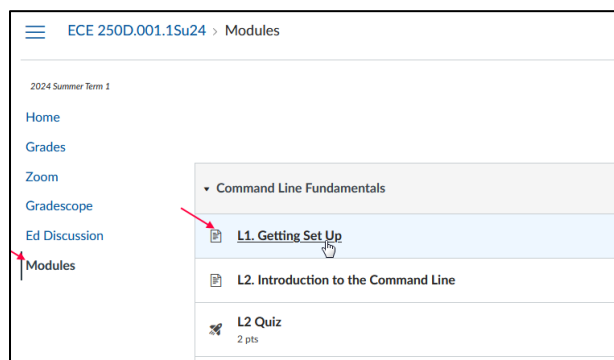
The purpose of this assignment is to build skill in the Linux/UNIX command line, an essential skill in computing. Basic competency with it is necessary to this and many other courses at Duke, and mastery of it will simplify your computing life immensely. To build these skills, you'll be learning the basics right at the start of the course. The mechanism for doing so will be a Duke OIT online course which incorporates video lessons and interactive exercises, as well as a few supplemental tasks later in this document.

In this assignment, you'll create your own *Ubuntu Linux* virtual machine (VM) in the Virtual Computing Manager (VCM). This can be useful as you have administrator ("root") access on this machine to configure it as you please. You can keep this VM around, as we'll use it in many subsequent assignments, and will refer to it as your "Linux VM".

First, see **Appendix A** below for info on reserving a Linux VM in the Duke Virtual Computing Manager.

NOTE: You must reserve the VMs that specifically have "**ECE 560 F24**" in the name. These don't count against your VCM allocation, and will be granted more lax security settings later in the semester.

Next, find the course materials on the course Canvas site under the **Modules** section:



Go through the modules in order, viewing the noted videos and taking the related quizzes.

NOTE: You only get one shot on the quiz questions, and they are your HW0 grade, but you're welcome to review the videos or test on your own command line as you take them.

Appendix A: Reserving a VM with the updated Virtual Compute Manager (VCM)

To reserve an appropriate VCM VM:

1. Visit <https://vcm.duke.edu/>
2. Click “Reserve a VM”:



3. Log in using your NetID if needed.
4. Pick *ECE 560 F24: Ubuntu 22.04* (or similar). This VM won't count against your VCM allotment.
5. Agree to the Terms of Use.

6. Your VM is created. Note its hostname:

The screenshot shows the Duke University Virtual Computing Manager (VCM) interface. The browser address bar displays <https://vcm.duke.edu/reservations/791>. The page header includes the Duke University logo and the text "Virtual Computing Manager" along with a welcome message for Tyler Bletsch, Ph.D. and a "Log out" link. The navigation menu contains "Home", "Reserve a VM", "Reserve a Container", "Available Apps", and "Help", along with a search bar.

My Reservations

VIRTUAL MACHINES

- [vcm-292.vm.duke.edu](#)
- [vcm-839.vm.duke.edu](#)

VM Management Tools

- Power on
- Power off
- Take a current snapshot
- Reload from snapshot
- Export this VM
- Reload original image
- Create an alias
- Transfer ownership
- Delete this reservation

Your Vm is ready

General Information

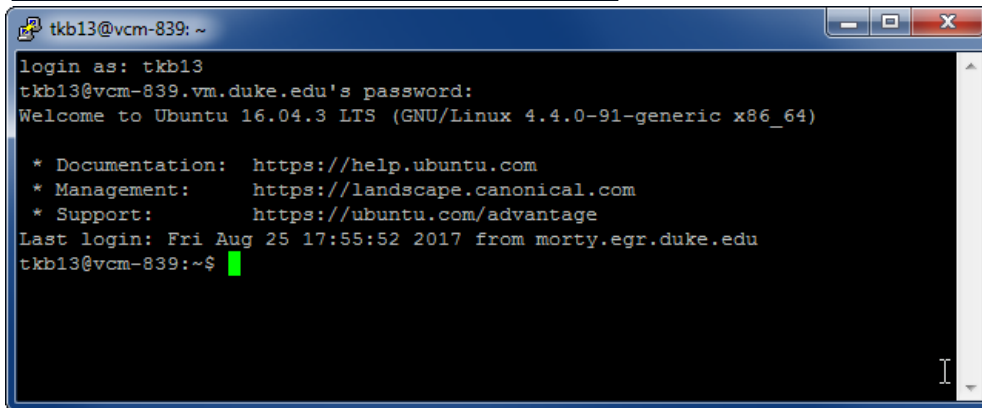
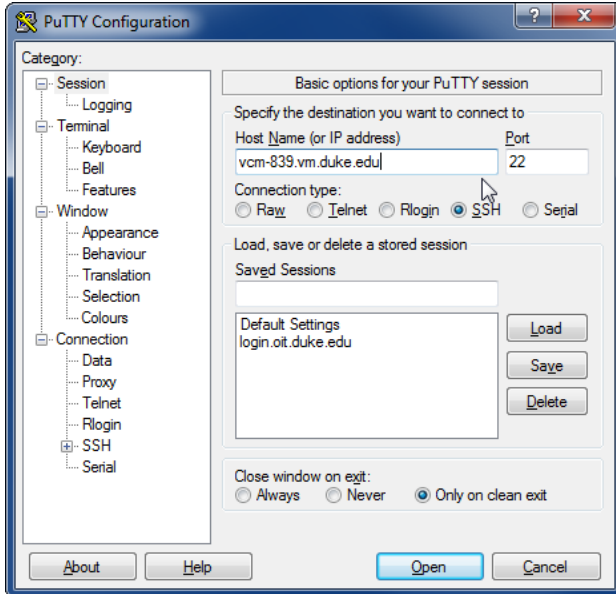
- Hostname:** [vcm-839.vm.duke.edu](#)
- Operating System:** Ubuntu 16.04
- Base memory:** 2 GB
- Processors:** 2
- Extra info:** Created by clockworks (on behalf of (colab2)) at 2017-08-25 12:06:16 -0400
- VM Status:** complete

Users

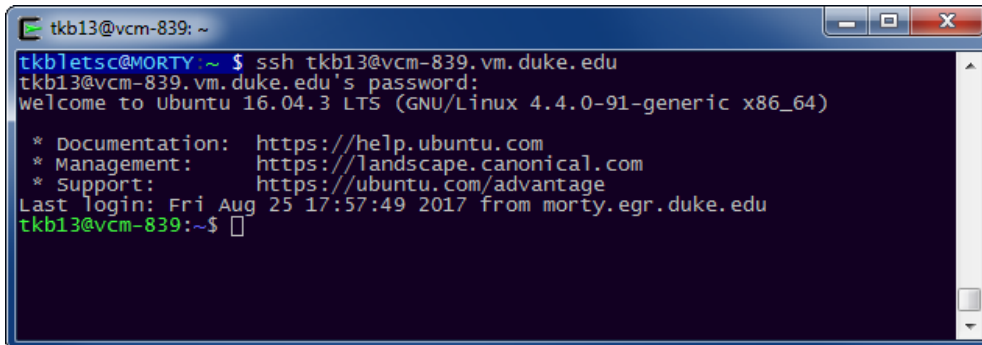
- User:** tkb13
- Admin user:** vcm
- Admin password:** [View password](#)

7. Connect to the given hostname using PuTTY (for Windows) or ssh (for Mac). Login with your NetID. You do not need to worry about the “admin password” shown in the web interface.

Windows example:



Linux/Mac-style example¹:



¹ Technically this is on UNIX-style terminal I have on my Windows machine, but it works the same way.