

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, just login to the training and screenshot the already-finished course result.

Note that unlike in ECE250, we will not be using the Duke Linux Cluster (login.oit.duke.edu).

Introduction

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.

A note on the environment you'll be using

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".

1. See **Appendix A** below for info on reserving a Linux VM in the Duke Virtual Computing Manager.
2. Find the course materials on the Duke Sakai site:
<https://sakai.duke.edu/portal/site/11745e97-3de0-468d-92e6-310aa6bec126/>
3. Watch the videos and answer the assessment questions.
4. Upon completion, go to the Gradebook view to review your evaluation scores. Screenshot this view and submit it to the Sakai assignment locker for Homework 0.

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 *Ubuntu 18.04*.
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) web interface. The browser address bar displays <https://vcm.duke.edu/reservations/791>. The page header includes the Duke University logo and the title "Virtual Computing Manager". A navigation bar contains links for Home, Reserve a VM, Reserve a Container, Available Apps, and Help, along with a search bar. The main content area is titled "VM Management Tools" and features a "My Reservations" sidebar on the left. The sidebar lists two virtual machines: "vcm-292.vm.duke.edu" and "vcm-839.vm.duke.edu", with the latter highlighted. The main panel for the selected VM shows a status message "Your Vm is ready" and a "General Information" section. This section lists the following details: 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, and VM Status: complete. Below the general information is a "Users" section showing the User: tkb13, Admin user: vcm, and Admin password: [redacted], with a "View password" button.

Virtual Computing Manager

Welcome, Tyler Bletsch, Ph.D. Log out

Home Reserve a VM Reserve a Container Available Apps Help Search

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

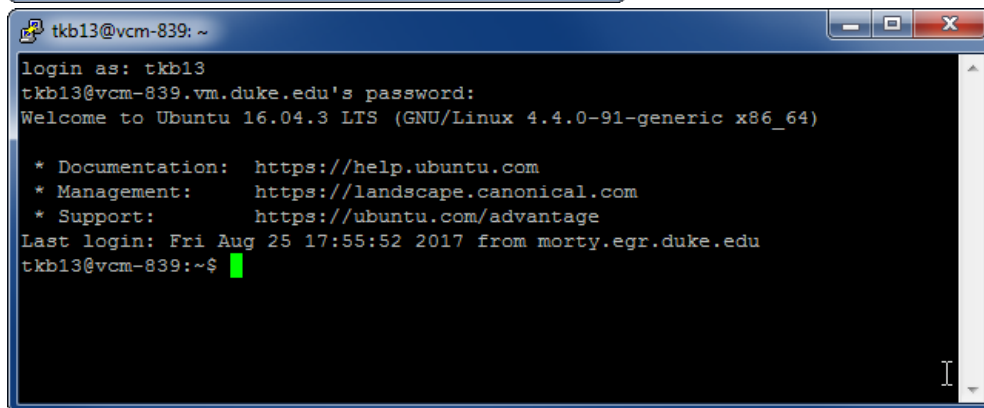
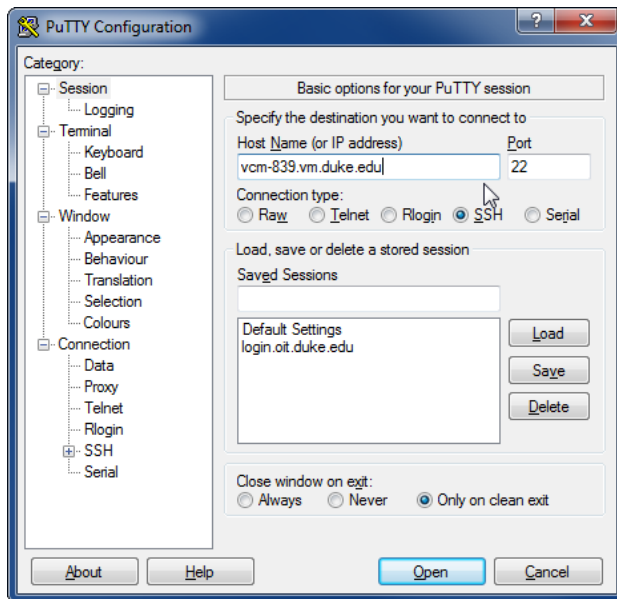
Admin user: vcm

Admin password: [redacted]

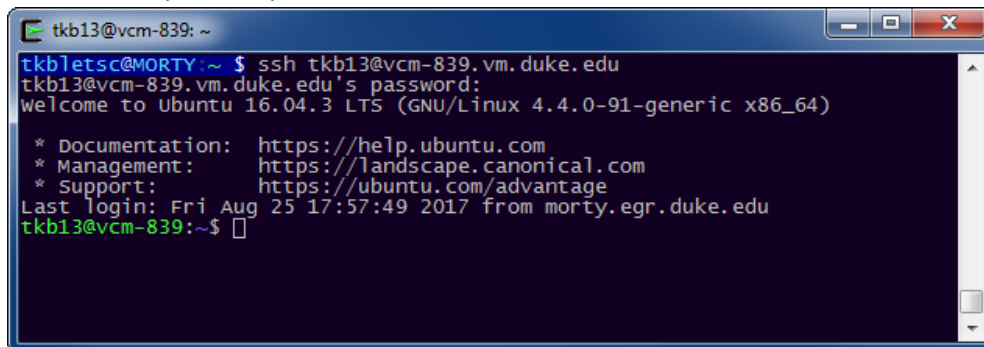
View password

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.