# Let's Build a Kernel

#### Week 2 Lab

While we can't change the physical hardware. We can change how we work with it. Optimizations on a kernel level cascade out effecting all areas of an operating system and the software that runs on top of it. This lab is about getting comfortable with the idea of building a kernel, and overcoming technical hurdles.

#### DO NOT CLEAR YOUR [BASH] HISTORY! IT WILL RESULT IN A MARK OF ZERO!

# Objectives

- 1. Develop an understanding of the build process of a Linux based Kernel
- 2. Troubleshoot issues caused by real world constraints

### Requirements

1. Use Ubuntu image found on vSphere *OR* download your own local copy to work with: <a href="https://www.dropbox.com/s/be2hz3cx7b8zkhl/COMP237">https://www.dropbox.com/s/be2hz3cx7b8zkhl/COMP237</a> PreCompile.zip

Username	Password	Root
comp237	tcpip	tcpip

- 2. All working files must end up under the /home/comp237/lab1
- 3. Retrieve a clone of latest kernel code via from the master GIT repository.
- 4. Compile and configure a replacement kernel as necessary with the following requirements met:
  - a. Kernel's version signature must include your first name and last name in it.
- 5. Replace old kernel with new kernel and verify

#### Notes

- 1. The current image is built from <u>Ubuntu 17.04 Zesty Zapus</u>
- 2. Submissions are **due at the start of Week 3's lab**, it is recommended you submit your work early. Email <a href="mailto:matthew.davey@flemingcollege.ca">matthew.davey@flemingcollege.ca</a> when completed.

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## Rubric

Student Number	
First Name	
Last Name	

Date Submitted	
Date Evaluated	

	0 Points	1 Point	2 Points
Requirements Met	Unfortunately, nothing was completed as specified in the Requirements section.	Some of the requirements were met, but not all.	All requirements were met and followed

Partial marks may be assigned at the discretion of the marker based on effort and the students present [bash] history.

Points Awarded	
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