CS302 -- Unix System Administration

Who

Randy Appleton
Seaborg 1131
227-1593
rappleto@nmu.edu
http://euclid.nmu.edu/~randy/Classes/CS302

What

This class is designed for students who are comfortable with computers but would like to more about UNIX and system administration. We will spend lots of time hands-on with Linux workstations in the computer lab. You should expect to be told a root password, and to treat that knowledge with respect. We've had several break-ins from people who did real damage. People who violate security will be referred to the department chair, may he have mercy on your soul.

The Lab

The lab is used by more than this class. Although we would like to keep these machines working, at times that will not be possible. Each of you will be responsible for one machine. It is your toy. You may play as you will provided that you don't cause others (including me) grief. Please see me before you set up any network server processes. We share the network with the rest of the building, and all of the machines are behind a firewall. These things need to be considered, but I'll say yes if I can (and I probably can, too). Euclid is our server. It is mine to maintain.

Textbook

There is no textbook for this class. Instead we will use the substantial on-line documentation about system administration and Linux. This does not mean that you will have no reading outside of class. Instead, I will try and assign take-home quizzes. Your task will be to find the answer to my questions any way you can.

One of the skills you will develop will be searching for solutions in on-line documentation. Four good starting points are the files in /usr/doc on the workstations, and the linux documentation project. The HOWTO's, mini-HOWTOs, can be found at www.linux.org/help/ldp.html and the Linux System Administrators Guide at http://www.linuxdoc.org/LDP/sag/index.html. Lots of people buy a Linux-Howto book; I have no particular book to recommend.

All my notes and previous tests can be found at the class web site listed above.

Grades

Grades are assigned from two midterms , projects and a final . There may be a quiz at the end of every section or two (always pre-announced). Each quiz counts for very little towards the total grade. Hopefully the quizzes will let you know how you are doing while there is still time to change it, and let me know what subject areas I need to review. All tests are open note and open book.

The projects are quite important. Each project will be structured so that everyone can finish it completely. If you have trouble with a project, come ask me (or a fellow student) for help. My goal is to have everyone challenged, but also finish each project. You can get help in any way you feel appropriate, but make sure that YOU DO THE WORK and that YOU UNDERSTAND THE CONCEPT.

Grades will be ABOUT 1/3 A's, 1/3 B's, and 1/3 C's. A grade sheet showing your grades and where you stand in the class can be found at the class website.

Late Policy

I hate late assignments!!! However, it is much better to turn something in late rather than not at all. The late penalty is one letter grade per for being late, plus more if it's VERY late. If there was some unavoidable reason you could not turn a project in on time (i.e. car crash, snow day, etc.) just ask me to waive the penalty. I'm pretty lenient.

Extra Credit

I'll be happy to give a little extra credit. It would probably be some sort of project, but I'm open to ideas. Ask me sometime after a midterm.

List of Topics

- List of definitions and terms
- Installing the base Linux system
- Installing update packages
- The UNIX command line
- User accounts and passwords
- Setting up basic networking
- Setting up X11
- Picking a window manager
- Init and inittab
- The Network Information System (yp)
- Printers, print filters, and printing
- Cron and crontab
- Security and keeping the evil people out.
- Mail
- FTP
- Web serving
- Legal stuff
- Writing shell scripts
- Writing perl scripts
- Buying hardware and software
- Samba and emulating a Novel server