

# Beginning and Intermediate System Administration DeCal

Week 1

February 1, 2010

# Introduction

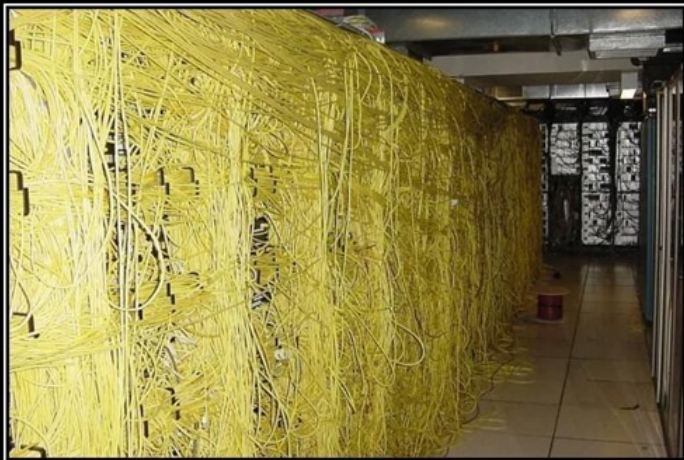
- CS98/198-15: Beginning and Intermediate System Administration DeCal
  - Sponsored by the Open Computing Facility
  - Offered since way back when (2001-ish)

# Who are We?

- Four facilitators
  - Sanjay ([sanjayk+decal@ocf.berkeley.edu](mailto:sanjayk+decal@ocf.berkeley.edu))
  - Alan ([alanw+decal@ocf.berkeley.edu](mailto:alanw+decal@ocf.berkeley.edu))
  - Michael ([mgasidlo+decal@ocf.berkeley.edu](mailto:mgasidlo+decal@ocf.berkeley.edu))
  - Jordan ([jordan+decal@ocf.berkeley.edu](mailto:jordan+decal@ocf.berkeley.edu))
- Office Hours: Listed on site below, also by appointment
  - [www.ocf.berkeley.edu/staff\\_hours](http://www.ocf.berkeley.edu/staff_hours)
  - Direct the administrative questions to us
  - Don't hesitate to contact us about questions and concerns!







A NETWORK CABLE IS UNPLUGGED

You're Screwed.



```
Compaq Ltd, Synchronous FFF and C130B HBLC (c) 1994
Linux port (c) 1993 Building Number Three Ltd & Jan "Yong" Kozmoxak.
ide-floppy driver 0.77.uv
highpoint HPT370 Softwareraid driver for linux version 0.01
No raid array found
SCSI subsystem driver Revision: 1.00
pci2990: PCI BIOS not present
pci2220: PCI BIOS not present
Red Hat/Adaptec aacraid driver, Apr 14 2002
AC970: No PCI BIOS found!
AC970: 0 adapters found
Dmware Storage Controller device driver for linux v1.02.00.055.
3a-xxxx: tw_scsi_detect(): No pci interface present.
request_module(scsi_hostadapter): Root fs not mounted
request_module(scsi_hostadapter): Root fs not mounted
i2o_scsi.c: Version 0.0.1
  cache_pool: 0 bytes @ c1004340
  (512 byte buffers X 4 cas_queues X 0 i2o controllers)
NET4: Linux TCP/IP 1.0 for NET4.0
IP Protocols: ICMP, UDP, TCP, IGMP
IP: routing cache hash table of 512 buckets, 40bytes
TCP: Hash tables configured (established 2048 bind 2048)
NET4: Unix domain sockets 1.0/SMP for Linux NET4.0.
```

# LINUX

MOST PEOPLE AREN'T INTERESTED IN ASSEMBLING THEIR CAR  
COMPLETELY FROM SCRATCH EITHER.



# THE INTERNET

**A series of tubes.**



# What and Why?

- System Administration
  - Not necessarily how to use a system
  - GUIs, how to get your modem working, etc... not covered in class. But the skills sets are!
  - The "magic" behind how computer labs (Like inst) work.
- Aspiring sysadmin
- Marketable skills (maybe)
- Manage your own resources

# What and Why?

- Further understanding of “how stuff works”
  - Internet servers
  - Security, encryption, and why it matters
  - Communication on the network
- Two sections offered this semester: beginning and intermediate
  - For beginners, black box implementation; we’ll worry about the initial setup.
  - For the intermediate, dig a little deeper.
  - Check the DeCal website for more information

# Prerequisites

- None!
  - But you may find things a bit easier if you've got some groundwork already. (Interaction with `inst` accounts)
  - It would help to learn a text editor; the sooner the better.
  - A few choices are `nano`, `vim`, `emacs`.
  - `vimtutor` is an excellent guide to learn `vim`.

# Expectations

- Check the website for the latest updates!
- Come to class
  - Don't sleep (Try not to)
- Do the reading
  - Material builds on each other
  - Helps to read the material and ask about topics while it's fresh in lecture
  - Print out the notes (inst accounts) and mark them up
- Do the work
  - CS98/198, 2 units = 6 hours of work (at least!)
  - [http://slc.berkeley.edu/ucftr/docs/unit\\_value.pdf](http://slc.berkeley.edu/ucftr/docs/unit_value.pdf)
  - Participation and effort in lab/homework.

# Expectations

## Continued

- Work with your classmates and peers
- Ask questions in class, through email, in office hours. . .
- Seek help from all the resources available to you
  - Peers
  - Facilitators
  - Internet

# Logistics and Policies

## Course Format

- Lecture: 0.5-1 hour
- Lab: Rest of the time
- Beginner will start here (310 Soda) for lecture
- Intermediate go straight to lab (271 Soda)
- Homework: assigned weekly (most of the time)
- Grading
  - P/NP basis, final project 50%, labs 30%, homework 20%
  - Submissions policy
  - **Final project is mandatory!**

# Topics

- History of UNIX, GNU/Linux
- Command line interface (CLI)
- The Internet
- Server Daemons (web, databases, etc)
- The LAMP model
- Multi-user environments
- Security
- *Special topics?*
  - **Your** input is needed!

# Homework #1

- Create an OCF account
  - Lab is located in Eshleman Hall, floor G
  - <http://www.ocf.berkeley.edu/lab/labdirectionsocf.jpg>
  - Do this before Thursday to ensure your account is created this week.
  - <http://www.ocf.berkeley.edu>
- Fill out the course survey (online)
  - <http://www.surveymonkey.com/s/KMQFF9B>



Questions?