System Administration
What System Administrator Should do? (1)

- Ordinary list
  - Install new system, programs and OS updates
  - Monitoring system and trying to Tune performance
  - Adding and removing users
  - Adding and removing hardware
  - Backup and Restore
  - Security
What System Administrator Should do? (2)

- Non-technique list
  - Helping users
  - Maintaining documentation
  - Moving furniture
  - Burning your liver
  - Good communication and memorization

ARE YOU COMING TO BED?

I CAN'T. THIS IS IMPORTANT.

WHAT?

SOMEONE IS WRONG ON THE INTERNET.
What System Administrator Should do? (3)

- The best words to describe the job
  - Thankless job.
    - [http://www.sysadminday.com/](http://www.sysadminday.com/)
  - System administration is like keeping the trains on time; no one notices except when they’re late.
  - 氣象局：「我們對的時候，沒人記得；我們錯的時候，沒人忘記。」

- Philosophy of system administration
  - Know how things really work.
  - Plan it before you do it.
  - Make it reversible
  - Make changes incrementally.
  - Test before you unleash it.
Flow of Change

- Backup before changing
  - Think your fallback

- Apply change in new file
  - on test environment

- Restart the system

- Is everything fine?
  - No: Restore Procedures
    - Think another solution
  - Yes: Run Test

- Is everything fine?
  - No: Apply to Real system
  - Yes
What you can learn in this course?

- The skill to be a candidate of system administrator
- Information about CS computer center

- System Admin / Network Admin?
  - Play with computers

- What FreeBSD can do.

- 資安學程 [http://isc.cs.nctu.edu.tw/]
Attitude

- Attend every class
- Do every exercise
  - As early as possible
  - On your own
- Read book and practice at least 6 hours every week
  - Use unix-like environment
  - Recommend: more than 1.5 hours/day averagely.
- Collect information on the internet
  - The newer, the better.
Syllabus

- Website:  

- Instructors:  
  - 黃懷陞 huanghs@cs.nctu.edu.tw  
  - 劉用翔 liuyh@cs.nctu.edu.tw  
  - 蔡佳宏 chiahung@cs.nctu.edu.tw

- Time:  
  - Tue. IJK (PM 6:30 ~ 9:20)

- Place:  
  - EC115

- TAs:  
  - We might get about 4~6 TAs.  
  - Email to TAs: (TBA)

- Textbook:  
Syllabus – Content

- We will cover the following chapters in this semester (SysAdm):
  - Chapter 1 ~ 13
  - Chapter 14, 18, 19, 22, 23
  - Chapter 25, 26, 29 ~ 32

- The following chapters is covered in the next semester (NetAdm):
  - Chapter 14 ~ 17, 20 ~ 22
  - NAT, DHCP, VPN, Proxy, …
  - Perl Programming
  - News Server
# Syllabus – Text book outline

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Syllabus – Grade Policy

- Mid
  - 15 ~ 20%

- Final
  - 15 ~ 20%

- Exercise (Homeworks)
  - 60 ~ 70%
    - No Delay Work
    - 4 exercises
    - 1 term project
What you should prepare?

- **Background knowledge**
  - UNIX commands
  - Basic of TCP/IP Networking (not required)

- **Environment**
  - One dedicated PC
    - Or dual OS in your PC.

- **Yourself**
  - Your hard study
Finally, Am I OK to take this course?

- Are you willing to devote yourself to exercise?
  - Yes! Please come

- Are you newbie in this area?
  - Yes!? It’s ok, Please come

- Do you take more than 3 major courses?
  - Yes!??? It is quite dangerous, but I can not stop u
Break time.