



Introduction to Course Content

Outline

- ☐ What SA Should **do**.
- ☐ What You can expect to **learn** from this course.
- ☐ What **attitude** you should take.
- ☐ Syllabus
 - Course Info.
 - Content
 - Grade Policy
- ☐ What You should prepare.
- ☐ Am I OK to take this course?

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 lung
- Good communication and memorization



What System Administrator Should do? (3)

☐ The best words to describe the job

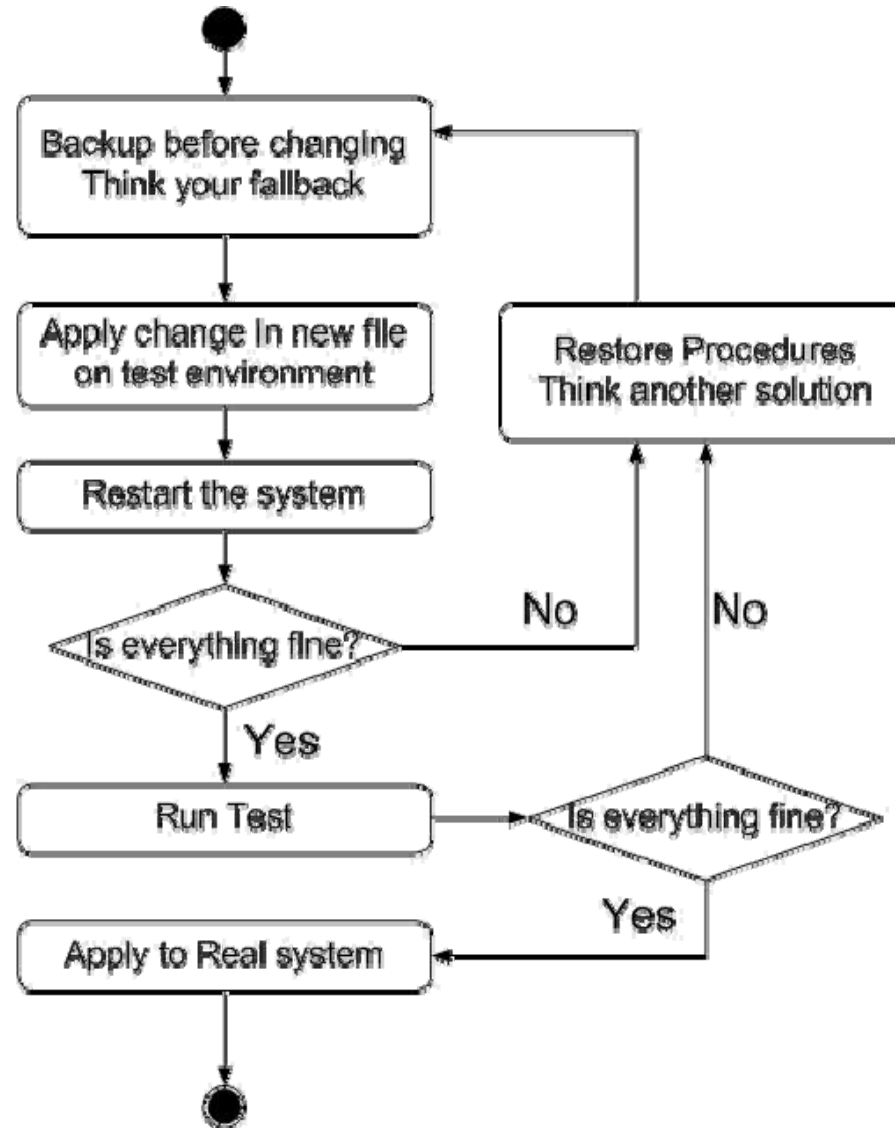
- Thankless job.
- System administration is like keeping the trains on time; no one notices except when they're late.

☐ 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 .

What System Administrator Should do? (4)

□ Flow of Change



What you can learn in this course?

- ☐ Mostly, the skill to be a candidate of system administrator
- ☐ Secondary, information about CS computer center

Attitude

- ☐ Attend every class
- ☐ Do every exercise
 - As early as possible
 - On your own
- ☐ Read book and practice at least 6 hours every week
 - Recommend: more than 1.5 hours/day averagely.
- ☐ Collect information on the internet

Syllabus

☐ Website:

- <http://www.cs.nctu.edu.tw/~chwong/course/sysadm/>

☐ Instructor:

- 翁綜禧 chwong@cs.nctu.edu.tw

☐ Time:

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

☐ Textbook:

- [UNIX System Administration Handbook," 3rd ed.](#)



Syllabus - Content

- ❑ We will cover the following chapters in this semester (SysAdm):
 - Chapter 1 ~ 12
 - Chapter 13, 17, 18, 23, 26
 - Shell Programming, Perl Programming
- ❑ The following chapters is covered in the next semester (NetAdm):
 - Chapter 14, 15, 16, 19, 20 , 22
 - News Server
 - SNMP
 - Perl Programming

Syllabus – Text book outline

- ❑ Chap 1 – Where to start.
- ❑ Chap 2 – Booting and shutting down
- ❑ Chap 3 – Rootly powers
- ❑ Chap 4 – Controlling processes
- ❑ Chap 5 – The Filesystem
- ❑ Chap 6 – Adding new users
- ❑ Chap 7 – Serial device
- ❑ Chap 8 – Adding a disk
- ❑ Chap 9 – Periodic process
- ❑ Chap 10 – Backups
- ❑ Chap 11 – Syslog and log files
- ❑ Chap 12 – Drivers and the kernel
- ❑ Chap 13 – TCP/IP Networking
- ❑ Chap 14 – Routing
- ❑ Chap 15 – Network hardware
- ❑ Chap 16 – The domain name system
- ❑ Chap 17 – The network file system
- ❑ Chap 18 – Sharing system files
- ❑ Chap 19 – Electronic mail
- ❑ Chap 20 – Network management and debugging
- ❑ Chap 21 – security
- ❑ Chap 22 – Web hosting and internet servers
- ❑ Chap 23 – Printing
- ❑ Chap 24 – Maintenance and environment
- ❑ Chap 25 – Performance analysis
- ❑ Chap 26 – Cooperating with Windows.

Syllabus – Grade Policy

❑ Mid

- 25 ~ 30%
- 2006/11/08

❑ Final

- 35 ~ 40%
- 2007/01/10

❑ Exercise (Homeworks)

- 40 ~ 45%
- **No Delay Work**
- We will have probably 5 exercises
 - 4 normal
 - 1 final project
- We may have some **bonus** quiz

**Grade will not be normalize.
Why?**

**Do exercise gets points.
Study book gets points.**

This might be discussed again in class when the list is ascertained.

What you should prepare?

☐ Background knowledge

- Basics of TCP/IP Networking (not required)

☐ Environment

- One dedicated PC
 - Or use virtual PC.
- One extra IP

☐ 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



Basic knowledge in this course

Login

❑ SSH (Secure Shell)

- PuTTY:

<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>

- Chinese Environment:

<http://www.cs.nctu.edu.tw/help/putty.html>



```
chbsd - PuTTY
login as: chwong
Password:
Last login: Wed Sep 13 10:47:19 2006 from 192.168.53.1
Copyright (c) 1980, 1983, 1986, 1988, 1990, 1991, 1993, 1994
    The Regents of the University of California.  All rights reserved.

FreeBSD 6.1-STABLE (CHBSD) #2: Sat Jun  3 01:22:39 CST 2006

Welcome to CHWONG's FreeBSD Server!

Forget what directory you are in? Type "pwd".
-- Dru <genesis@istar.ca>
chbsd [/home/chwong] -chwong- _
```


Commands

❑ Useful commands

- passwd
- ls
- ps
- mkdir/rmdir
- cp/mv/rm
- Email reader: mutt, pine, ...etc.
- News reader: tin
- Connecting: ssh/telnet
- Manual: man, info. ...etc.
- exit/logout

Q&A

Break time.