

Welcome to Linux!

SPS *SysAds*

January 24, 2005

1 Dos and Don'ts in the SPS Computer Cluster

Do:

- Choose a hard-to-crack password and change your password often to ensure security.
- Log out after each time you log in.
- Take care of the facilities in the cluster. Don't misuse them. Approach the system administrators or seniors whenever you are in doubt when using the facilities.
- Approach the system administrators if you want to have any software/program installed on the computers.
- Each user has a disk quota of 100Mb on the SPS server. If you need more space for projects or research work, you need to ask for Dr Kuldip's permission to increase your personal quota.

Don't:

- Forget to log out when you leave¹.
- Switch off or reboot any of the computers in the cluster.
- Unplug or remove any of the hardware from the Computer Cluster.

2 How much do you know about Linux?

- Do you know how to **login**?
 - *You'd better!*
- Do you know any **linux command**?
 - *You should at least know `pine`, `logout` / `exit` and `yppasswd` by now.*
- Do you know that Linux commands can be called with various **options**?
 - *Try `pine -i` and compare its difference with `pine`.*

¹Yup, it is has been included in the "Do" list but its importance is worth mentioning one more time.

3 Printing

- `lpr filename` print files.
- `xpp filename` opens a GUI² window for you to edit options for printing. This includes printing only odd pages, printing many pages on one sheet of paper, etc.

4 Basic Linux Tricks

- `man command`
To find out the usage of the commands and the options with which you can use with them, you can type `man command` to read the manual pages. Use the arrow keys to scroll up and down the manual pages. Once you have finished reading these manual pages, press 'q' to quit.
Try '`man pine`' and '`man man`'.
- The magic <Tab> key
Try '`pi<Tab>`'. *Did you see pine on the screen?*
- Run jobs at the background
Try '`firefox`' and '`firefox &`'. Observe the difference.
- Need to print a document while another user has logged in?
Just need to use '`su your_username`' and type your password. And of course, **remember to log out after you finish using!**

5 Access Linux Server from Windows Workstations

- SSH Secure Shell
<ftp://mirror.nus.edu.sg/pub/windows/ssh/SSHSecureShellClient-3.2.9.exe>
<http://ssh.com/support/downloads/secureshellwks/non-commercial.html>
- Putty
<http://the.earth.li/~sgtatham/putty/latest/x86/putty.exe>
<http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>
- Use appGATE MindTerm applet to access SPS server
<http://sps.nus.edu.sg/computers/ssh.html>

6 Directories

On Linux, files are stored in directories (similar to the folders used in Windows). Some commands you can use on directories are:

- `ls` to list the contents of the current directory.
- `cd directoryname` to change directory to *directoryname*.³
- `mkdir directoryname` to create a new directory.

²GUI: Graphics User Interface.

³Use `cd ..` to change to the parent directory.

- **mv** *olddirectoryname newdirectoryname* moves *olddirectory* to *newdirectory*.

Try to do the following:

1. Go into and list the files in the ‘public_html’ directory.
2. Create a directory named ‘temp’ in your home directory.
3. Rename the ‘temp’ directory as ‘tempold’.
4. Move the ‘tempold’ directory into the ‘public_html’ directory.

7 Files

The following commands are useful for working with files.

- **cp** *sourcefile destinationfile* copies the source file as the destination file.
- **mv** *sourcefile destination* moves the source file to the destination.
- **file** *filename* will attempt to determine the file type of the file.
- **cat** *filename* will display the contents of the file on the screen.
- **rm** *filename* will remove the file. With the ‘-r’ option, it will also remove directories and all the files in the directory.

Try to do the following:

1. Create a file named ‘tempfile’ in your home directory.
2. Find out what is the file type of this file ‘tempfile’.
3. Copy this file ‘tempfile’ to the directory ‘tempold’ which you have created just now. (Note: ‘tempold’ is now in ‘public_html’ directory)
4. Now move this file ‘tempfile’ to the directory ‘public_html’. (Note: since you moved it, the file ‘tempfile’ should no longer exist in the ‘tempold’ directory.)
5. Display the contents of the file ‘index.php’ onto your screen. (Note: ‘index.php’ is in the ‘public_html’ directory.)
6. Remove the file ‘tempfile’ from both your home directory and ‘public_html’ directory.

8 Chatting

- **ssh** *hostname* Connects to the computer named. You will need to connect to `sps.nus.edu.sg` (the hostname you need to use) to chat with other users.
- **w** Lists the other users on the same computer as you.
- **finger** *username* Displays information on other users.
- **write** *username* Allows you to write to another user’s terminal.
- **talk** *username* Allows you to chat with another user in real time.

1. Connect to sps (use the command `ssh sps.nus.edu.sg`).

2. Run `w` to see who else is connected to sps.
3. `finger` one of the people who are online.
4. `write` onto each other's terminals. Please do not disturb people who are working and only write to friends who are also taking the linux tutorial.
5. Request `talk` with another linux tutorial classmate.

9 Have fun with Linux and find out more!

1. How to send an email to all students who joined SPS in 2002?
2. How to check you NUS Exchange email through `pine`?
3. Join the following commands to the right descriptions

<code>pwd</code>	An instant messenger which supports MSN messenger, Yahoo! and ICQ, etc
<code>fortune</code>	Display the running linux tasks
<code>xmms</code>	Lock the graphical display until a password is entered
<code>gaim</code>	Plays mp3 files, and looks similar to winamp
<code>last</code>	Displays the directory you are currently in
<code>top</code>	Show listing of last logged in users
<code>xlock</code>	A game cookie. Prints a quote, advice, and other crap

4. Find out more about hidden files

The two commands `ls ~` and `ls -a ~` give you different outputs because the second one displays the **hidden files** whose filename starts with the period character, for e.g. `.qmail`.

`~/qmail` is the file which stores the email addresses to which your sps emails will be forwarded. Try `cat ~/qmail` and `pico ~/qmail`.

You may want to explore the other files by picoing them.

Warning: You are advised not to delete any of the hidden files unless you know what they are used for.

10 Contact us

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