

Introduction to Linux System

By
Yothin Muangsommuk
Information engineering
Computer System Administrator Group

Topic Today

- ✓ What is Linux
- ✓ Package Manager
- ✓ Linux Structure
- ✓ Basic Linux Command
- ✓ Filesystem Permissions
- ✓ LAMP

Linux

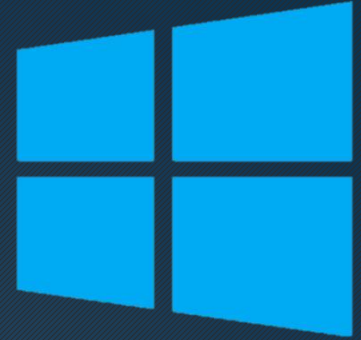


PRESENTS...

Linux vs Windows



VS



- Free
 - Reliability
 - Software Cost
 - Security
 - Open Source
- Ease
 - User
 - Software
 - Hardware

Distribution

ubuntu



archlinux™
A simple, lightweight linux distribution.

fedora



chrome



xbmc



<<back|track
network security suite.



debian



linux Mint
from freedom came elegance

Live GNU/Linux System



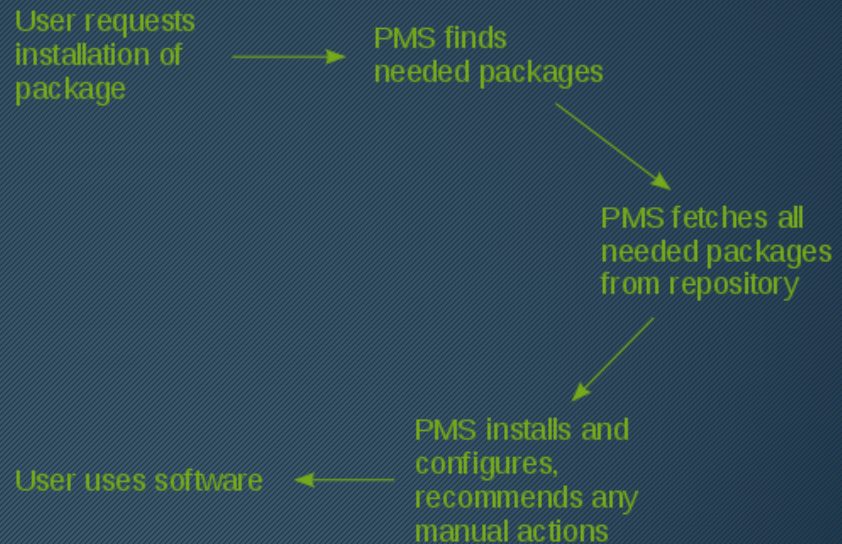
KNOPPIX



Package Manager

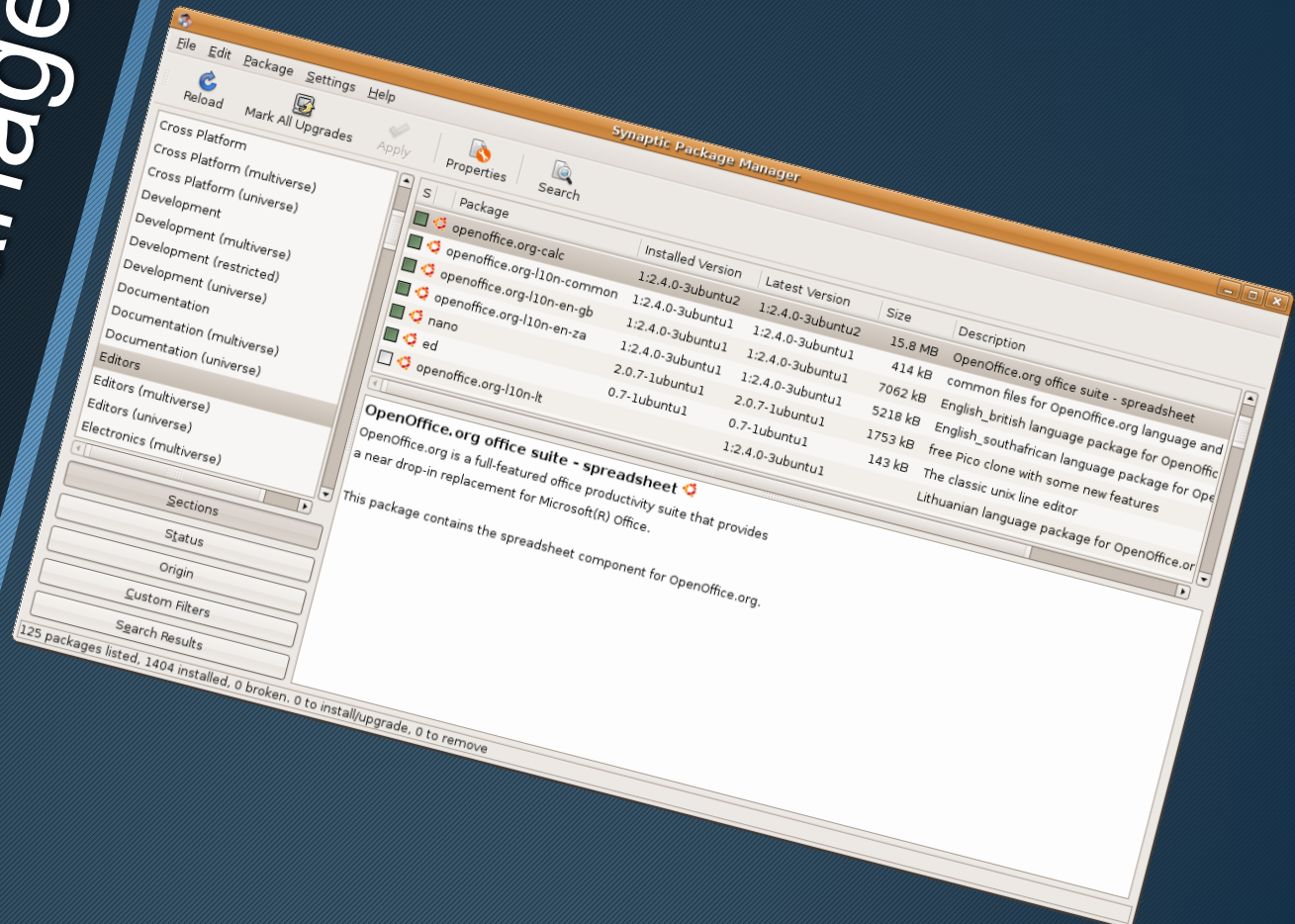
“the single biggest advancement Linux has brought to the industry”
Ian Murdock

a collection of software tools to automate the process of installing, upgrading, configuring, and removing software packages

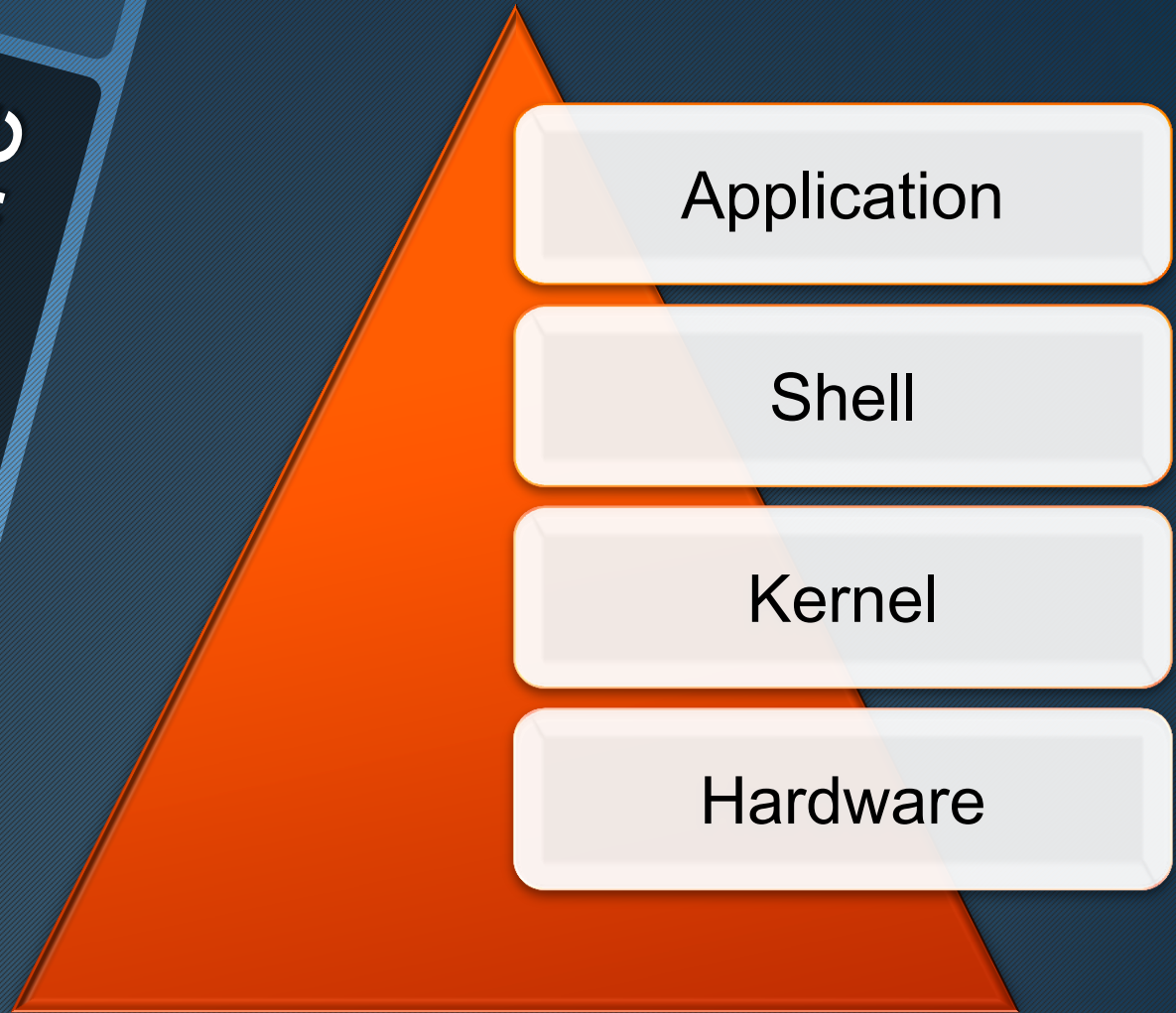


Package Manager

“Synaptic Package Manager



Linux Architecture



Directory Structure

ROOT

/bin

/boot

/dev

/etc

/home

/lib

/media

/proc

/sbin

/tmp

/usr

/var

Directory Command

cd (Change Directory)

- `cd /etc`
- `cd ..`
- `cd -`

mkdir (Make Directory)

- `mkdir new_folder`
- `mkdir -m755 www`

rmdir (Remove Directory)

- `rmdir /new_folder`
- `rmdir -r /new_folder`
- `rmdir -p /www3/data/img`

pwd (print work directory)

File Command

ls (list)

- ls -l
- ls -a

cp (Copy)

- cp httpd.log httpd.log1
- cp /var/www/.htaccess /var/www/tmp/
- cp -r /home/drupal /var/www

mv (Move)

- mv httpd.log httpd.bak
- mv ./test/* ./test2

rm (Remove)

- rm -r ./test
- rm -i ./user.log
- rm -f ./user.log

grep (global / regular expression / print)

| (Pipe)

Permission

```
shum@sol:~$ ls -l
total 20
drwx----- 2 shum  staff  4096 Jan 16 22:04 Mail
drwx----- 3 shum  staff  4096 Jan 16 14:15 csc128
drwxr-xr-x  2 shum  staff  4096 Jan 13 16:42 public
drwxr-xr-x  2 shum  staff  4096 Jan 16 14:07 public_html
-rw-r--r--  1 shum  staff   628 Jan 15 20:04 verse
```

Annotations for the `ls -l` output:

- file type**: Indicated by the first character of the permission string (yellow arrow pointing to `d` for directory).
- number of hard links**: The number between the file type and owner (yellow arrow pointing to `2`).
- user (owner) name**: The name between the number and group (yellow arrow pointing to `shum`).
- group name**: The name between the owner and size (yellow arrow pointing to `staff`).
- size**: The size in bytes (yellow arrow pointing to `4096`).
- date/time last modified**: The date and time (yellow arrow pointing to `Jan 16 22:04`).
- filename**: The name of the file or directory (yellow arrow pointing to `Mail`).
- permissions**: The next nine characters (yellow arrow pointing to `drwx-----`).
- user permissions**: The first three characters of the permission string (green arrow pointing to `drwx`).
- group permissions**: The next three characters of the permission string (cyan arrow pointing to `-----`).
- other (everyone) permissions**: The last three characters of the permission string (red arrow pointing to `-----`).

Legend for permission characters:

rwX

- r**: readable
- w**: writeable
- X**: executable

Permission Command

chmod (Change Mode)

- `chmod [option] mode file/directory_name`

chown (Change Owner)

- `chown [option] owner file/directory_name`

chgrp (Change Group)

- `chgrp [option] group_name file/directory_name`

User Command

adduser [username] [option]

passwd [username]

deluser [option] [username]

usermod [option] [username]

Other Command

whoami

who

last

sudo -s

Other Command

df (Disk Free)

du (Disk Usage)

top (display Linux tasks)

uname (print system information)

LAMP



“Linux Apache
MySQL PHP



APACHE 2.2



Thank for Coming

“Any Question ?