

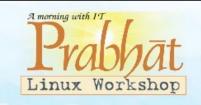
# Linux Basic Commands

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## Basic Linux Commands

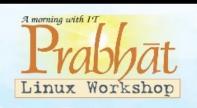


- File Handling
- Text Processing
- System Administration
- Process Management
- Archival
- Network
- File Systems
- Advanced Commands





### Sources to learn commands??

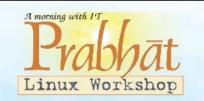


- Primary man(manual) pages.
  - man <command> shows all information about the command
  - \* <command> --help shows the available options
    for that command
- Secondary Books and Internet





# File Handling commands



mkdir – make directories

Usage: mkdir [OPTION] DIRECTORY...

eg. mkdir prabhat

• **ls** – list directory contents

Usage: ls [OPTION]... [FILE]...

eg. ls, ls -l, ls prabhat

• cd – changes directories

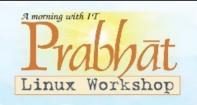
Usage: cd [DIRECTORY]

eg. cd prabhat





## File Handling(contd...)



pwd - print name of current working directory
 Usage: pwd

vim – Vi Improved, a programmers text editor
 Usage: vim [OPTION] [file]...
 eg. vim file1.txt





# File Handling(contd...)



cp – copy files and directories

Usage: cp [OPTION]... SOURCE DEST

eg. cp sample.txt sample\_copy.txt

cp sample\_copy.txt target\_dir

mv – move (rename) files

Usage: mv [OPTION]... SOURCE DEST

eg. mv source.txt target\_dir

mv old.txt new.txt







#### File Handling(contd...)

- rm remove files or directories

  Usage: rm [OPTION]... FILE...

  eg. rm file1.txt, rm -rf some\_dir
- find search for files in a directory hierarchy Usage: find [OPTION] [path] [pattern] eg. find file1.txt, find -name file1.txt
- history prints recently used commands
   Usage: history





#### Pattern



A Pattern is an expression that describes a set of strings which is used to give a concise description of a set, without having to list all elements.

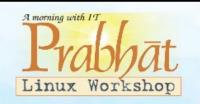
eg. ab\*cd matches anything that starts with ab and ends with cd etc.

Is \*.txt - prints all text files





## Text Processing



• cat – concatenate files and print on the standard output

Usage: cat [OPTION] [FILE]...

eg. cat file1.txt file2.txt

cat -n file1.txt

• echo – display a line of text

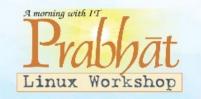
Usage: echo [OPTION] [string] ...

eg. echo I love India

echo \$HOME







#### Text Processing(contd...)

• grep - print lines matching a pattern

Usage: grep [OPTION] PATTERN [FILE]...

eg. grep -i apple sample.txt

• wc - print the number of newlines, words, and bytes in files

Usage: wc [OPTION]... [FILE]...

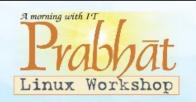
eg. wc file1.txt

wc -L file1.txt





## Text Processing(contd...)



• sort – sort lines of text files

Usage: sort [OPTION]... [FILE]...

eg. sort file1.txt

sort -r file1.txt







#### Linux File Permissions

- 3 types of file permissions read, write, execute
- 10 bit format from 'ls -l' command

1 234 567 8910

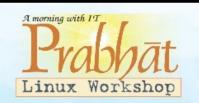
file type owner group others

- eg. drwxrw-r-- means owner has all three permissions, group has read and write, others have only read permission
- read permission 4, write 2, execute -1 eg. rwxrw-r-- = 764

$$673 = rw-rwx-wx$$



## System Administration



- chmod change file access permissions
   Usage: chmod [OPTION] [MODE] [FILE]
   eg. chmod 744 calculate.sh
- chown change file owner and group
   Usage: chown [OPTION]... OWNER[:[GROUP]] FILE...
   eg. chown remo myfile.txt





#### System Administration (contd...)



- su change user ID or become super-user Usage: su [OPTION] [LOGIN]
   eg. su remo, su
- passwd update a user's authentication tokens(s)
   Usage: passwd [OPTION]
   eg. passwd
- who show who is logged on Usage: who [OPTION]
   eg. who , who -b , who -q







• ps – report a snapshot of the current processes

Usage: ps [OPTION]

eg. ps, ps -el

• kill – to kill a process(using signal mechanism)

Usage: kill [OPTION] pid

eg. kill -9 2275





#### Archival



• tar – to archive a file

Usage: tar [OPTION] DEST SOURCE

eg. tar -cvf /home/archive.tar /home/original tar -xvf /home/archive.tar

zip – package and compress (archive) files
 Usage: zip [OPTION] DEST SOURSE
 eg. zip original.zip original

• unzip – list, test and extract compressed files in a ZIP archive

Usage: unzip filename







#### Network

ssh – SSH client (remote login program)

"ssh is a program for logging into a remote machine and for executing commands on a remote machine"

Usage: ssh [options] [user]@hostname

eg. ssh -X guest@10.105.11.20

scp – secure copy (remote file copy program)

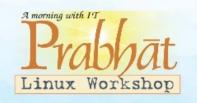
"scp copies files between hosts on a network"

Usage: scp [options] [[user]@host1:file1] [[user]@host2:file2]

eg. scp file1.txt guest@10.105.11.20:~/Desktop/







- fdisk partition manipulator
   eg. sudo fdisk -l
- mount mount a file system
   Usage: mount -t type device dir
   eg. mount /dev/sda5 /media/target
- umount unmount file systems
   Usage: umount [OPTIONS] dir | device...
   eg. umount /media/target





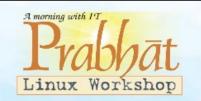




- du estimate file space usage
   Usage: du [OPTION]... [FILE]...
   eg. du
- df report filesystem disk space usage
  Usage: df [OPTION]... [FILE]...
  eg. df
- quota display disk usage and limits
   Usage: quota [OPTION]
   eg. quota -v



#### **Advanced Commands**



• **reboot** – reboot the system

Usage: reboot [OPTION]

eg. reboot

• poweroff – power off the system

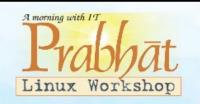
Usage: poweroff [OPTION]

eg. poweroff





# Suggested Material



- The UNIX Programming Environment by Kernighan and Pike (PrenticeHall)
- Your UNIX: The Ultimate Guide by Sumitabha Das







## Thank You









kate – KDE Advanced Text Editor

Usage: kate [options][file(s)]

eg. kate file1.txt file2.txt

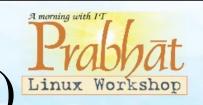
vim – Vi Improved, a programmers text editor
 Usage: vim [OPTION] [file]...
 eg. vi hello.c

• gedit - A text Editor. Used to create and edit files.

Usage: gedit [OPTION] [FILE]...







- **bg** make a foreground process to run in background Usage: type 'ctrl+z' and then 'bg <job id>'
- fg to make background process as foreground process Usage: fg [jobid]
- **jobs** displays the names and ids of background jobs Usage: jobs







## Advanced Commands (contd...)

• sed - stream editor for filtering and transforming text Usage: sed [OPTION] [input-file]... eg. sed 's/love/hate/g' loveletter.txt

awk - pattern scanning and processing language
 eg. awk -F: '{ print \$1 }' sample\_awk.txt







• find - search for files in a directory hierarchy

Usage: find [OPTION] [path] [pattern]

eg. find -name file1.txt

• locate – find or locate a file

Usage: locate [OPTION]... FILE...

eg. locate file1.txt

