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SY Comp A3

Assignment:1

Aim: Study of Important Linux Commnads

Objective: To study frequently used linux commands

Commands:

1) man :

man - an interface to the on-line reference manuals

Discription:

man is the system's manual pager. Each page argument given to man is normally the ` name of a program, utility or function. The manual page associated with each of these arguments is then found and displayed.

Example:

man ls :- Display the manual page for the item (program) ls.
man cat :- Display the manual page for the item (program) cat.
man touch :- Display the manual page for the item (program) touch.
man grep: Display the manual page for the item (program) grep.
man mkdir :- Display the manual page for the item (program) mkdir.
man cd : Display the manual page for the item (program) cd.

2) ls :

ls - list directory contents

SYNOPSIS
ls [OPTION]... [FILE]...

DESCRIPTION
List information about the FILEs (the current directory by default). Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.

Mandatory arguments to long options are mandatory for short options too.

-a, --all
do not ignore entries starting with .

-A, --almost-all
do not list implied . and ..
etc..

Exit status:
0 if OK,

1 if minor problems (e.g., cannot access subdirectory),

2 if serious trouble (e.g., cannot access command-line argument).

Examples:
1) ls :-

ls with no option list files and directories in bare format where we won't be able to view details like file types, size, modified date and time, permission and links etc.

2) ls -l

Here, **ls -l** (**-l** is character not one) shows file or directory, size, modified date and time, file or folder name and owner of file and its permission.

3) ls -a

List all files including hidden file starting with '**.**'. it will lsit hidden files.

4) ls -lh

With combination of **-lh** option, shows sizes in human readable format.

5) ls -F

Using **-F** option with **ls** command, will add the **'/'** Character at the end each directory.

6) ls -ltr

With combination of **-ltr** will shows latest modification file or directory date as last.

7) ls -i

With **-i** options list file / directory with inode number.

8) ls -n

To display **UID** and **GID** of files and directories. use option **-n** with ls command.

3)pwd :

Print the name of the current working directory.

Options:
-L print the value of $PWD if it names the current working directory
-P print the physical directory, without any symbolic links

4) cd :

Change the shell working directory.

Change the current directory to DIR. The default DIR is the value of the HOME shell variable.

Options:
-L force symbolic links to be followed: resolve symbolic links in DIR after processing instances of `..'
-P use the physical directory structure without following symbolic links: resolve symbolic links in DIR before processing instances of `..'

-e if the -P option is supplied, and the current working
directory cannot be determined successfully, exit with
a non-zero status
-@ on systems that support it, present a file with extended
attributes as a directory containing the file attributes

5) cat :

'cat' copies each FILE ('-' means standard input), or standard input if none are given, to standard output.

options::.

'-A'
'--show-all'
Equivalent to '-vET'.

'-b'
'--number-nonblank'
Number all nonempty output lines, starting with 1.

'-e'
Equivalent to '-vE'.

'-E'
'--show-ends'
Display a '$' after the end of each line.

'-n'
'--number'
Number all output lines, starting with 1. This option is ignored
if '-b' is in effect.

6) touch file :

'touch' changes the access and/or modification timestamps of the specified files.

options::.

'-a'
'--time=atime'
'--time=access'
'--time=use'
Change the access timestamp only. *Note File timestamps::.

'-c'
'--no-create'
Do not warn about or create files that do not exist.

'-d TIME'

‘--date=TIME’
Use TIME instead of the current time. It can contain month names, time zones, ‘am’ and ‘pm’, ‘yesterday’, etc. For example, ‘--date="2004-02-27 14:19:13.489392193 +0530"’ specifies the instant of time that is 489,392,193 nanoseconds after February 27, 2004 at 2:19:13 PM in a time zone that is 5 hours and 30 minutes east of UTC. *Note Date input formats::. File systems that do no\
t
support high-resolution timestamps silently ignore any excess precision here.

‘-f’
Ignored; for compatibility with BSD versions of ‘touch’.

‘-h’
‘--no-dereference’
Attempt to change the timestamps of a symbolic link, rather than what the link refers to. When using this option, empty files are not created, but option ‘-c’ must also be used to avoid warning

7) ps :

ps - report a snapshot of the current processes.

Options :

-A Select all processes. Identical to -e.

-a Select all processes except both session leaders (see getsid(2)) and processes not associated with a terminal.

-d Select all processes except session leaders.

--deselect
Select all processes except those that fulfill the specified conditions (negates the selection). Identical to -N.

-e Select all processes. Identical to -A.

g Really all, even session leaders. This flag is obsolete and may be discontinued in a future release. It is normally implied by the a flag, and is only useful when operating in the sunos4 personality.

-N Select all processes except those that fulfill the specified conditions (negates the selection). Identical to –deselect.

9) top :

top - display Linux processes

SYNOPSIS

top -hv|-bcHiOSs -d secs -n max -u|U user -p pid -o fld -w [cols]

COMMAND-LINE Options

The command-line syntax for top consists of:

-hv|-bcHiOSs -d secs -n max -u|U user -p pid -o fld -w [cols]

The typically mandatory switch (`-') and even whitespace are completely optional.

-h | -v :Help/Version

Show library version and the usage prompt, then quit.

-b :Batch-mode operation

Starts top in Batch mode, which could be useful for send ing output from top to other programs or to a file. In this mode, top will not accept input and runs until the iterations limit you've set with the `-n' command-line option or until killed.

-c :Command-line/Program-name toggle

Starts top with the last remembered `c' state reversed. Thus, if top was displaying command lines, now that field will show program names, and vice versa. See the `c' interactive command for additional information.

-d :Delay-time interval as: -d ss.t (secs.tenths)

Specifies the delay between screen updates, and overrides the corresponding value in one's personal configuration file or the startup default. Later this can be changed with the `d' or `s' interactive commands.

10) kill :

'kill' command sends a signal to processes, causing them to terminate or otherwise act upon receiving the signal in some way. Alternatively, it lists information about signals.

11) chmod :

'chmod' changes the access permissions of the named files.

options::.

'-c'
'--changes'
Verbosely describe the action for each FILE whose permissions actually changes.

'-f'
'--silent'
'--quiet'
Do not print error messages about files whose permissions cannot b\
e

changed.

‘--preserve-root’
Fail upon any attempt to recursively change the root directory, ‘/’. Without ‘--recursive’, this option has no effect. *Note Treating / specially::.

‘--no-preserve-root’
Cancel the effect of any preceding ‘--preserve-root’ option. *Not\
e
Treating / specially::.

‘-v’
‘--verbose’
Verbosely describe the action or non-action taken for every FILE.

‘--reference=REF_FILE’
Change the mode of each FILE to be the same as that of REF_FILE. *Note File permissions::. If REF_FILE is a symbolic link, do not use the mode of the symbolic link, but rather that of the file it refers to.

12)grep :

‘grep’ prints lines that contain a match for a pattern.

‘-e PATTERN’
‘--regexp=PATTERN’
Use PATTERN as the pattern. If this option is used multiple times or is combined with the ‘-f’ (‘--file’) option, search for all patterns given. (‘-e’ is specified by POSIX.)

‘-f FILE’
‘--file=FILE’
Obtain patterns from FILE, one per line. If this option is used multiple times or is combined with the ‘-e’ (‘--regexp’) option, search for all patterns given. The empty file contains zero patterns, and therefore matches nothing. (‘-f’ is specified by POSIX.)

‘-i’
‘-y’
‘--ignore-case’
Ignore case distinctions, so that characters that differ only in case match each other. Although this is straightforward when letters differ in case only via lowercase-uppercase pairs, the behavior is unspecified in other situations. For example, uppercase “S” has an unusual lowercase counterpart “ſ” (Unicode character U+017F, LATIN SMALL LETTER LONG S) in many locales, and it is unspecified whether this unusual character matches “S” or “s\
”
even though uppercasing it yields “S”. Another example: the

lowercase German letter “ß” (U+00DF, LATIN SMALL LETTER SHARP S) i\
s
normally capitalized as the two-character string “SS” but it does
not match “SS”, and it might not match the uppercase letter “ẞ”
(U+1E9E, LATIN CAPITAL LETTER SHARP S) even though lowercasing the
latter yields the former.

13) tar :

tar - an archiving utility

tar -A [OPTIONS] ARCHIVE ARCHIVE

tar -c [-f ARCHIVE] [OPTIONS] [FILE...]

tar -d [-f ARCHIVE] [OPTIONS] [FILE...]

tar -t [-f ARCHIVE] [OPTIONS] [MEMBER...]

tar -r [-f ARCHIVE] [OPTIONS] [FILE...]

tar -u [-f ARCHIVE] [OPTIONS] [FILE...]

tar -x [-f ARCHIVE] [OPTIONS] [MEMBER...]

14) gzip :

Compresses file and renames it to file.gz

15) uname :

‘uname’: Print system information

options::.

‘-a’
‘--all’
Print all of the below information, except omit the processor type
and the hardware platform name if they are unknown.

‘-i’
‘--hardware-platform’
Print the hardware platform name (sometimes called the hardware
implementation). Print ‘unknown’ if this information is not
available. Note this is non-portable (even across GNU/Linux
distributions).

‘-m’
‘--machine’
Print the machine hardware name (sometimes called the hardware
class or hardware type).

‘-n’
‘--nodename’
Print the network node hostname.

‘-p’
‘--processor’
Print the processor type (sometimes called the instruction set architecture or ISA). Print ‘unknown’ if this information is not available. Note this is non-portable (even across GNU/Linux distributions).

‘-o’
‘--operating-system’
Print the name of the operating system.

16) du :

‘du’ reports the amount of disk space used by the set of specified file\

options::.

‘-0’
‘--null’
Output a zero byte (ASCII NUL) at the end of each line, rather tha\
n
a newline. This option enables other programs to parse the output even when that output would contain data with embedded newlines.

‘-a’
‘--all’
Show counts for all files, not just directories.

‘--apparent-size’
Print apparent sizes, rather than disk usage. The apparent size o\
f
a file is the number of bytes reported by ‘wc -c’ on regular files\
,
or more generally, ‘ls -l --block-size=1’ or ‘stat --format=%s’. For example, a file containing the word ‘zoo’ with no newline would, of course, have an apparent size of 3. Such a small file may require anywhere from 0 to 16 KiB or more of disk space, depending on the type and configuration of the file system on whic\
h
the file resides. However, a sparse file created with this command:

dd bs=1 seek=2GiB if=/dev/null of=big

has an apparent size of 2 GiB, yet on most modern systems, it actually uses almost no disk space.

‘-B SIZE’

‘--block-size=SIZE’

17) wget :

This file documents the GNU Wget utility for downloading network data.

18) free :

free - Display amount of free and used memory in the system

OPTIONS

-b, --bytes
Display the amount of memory in bytes.

-k, --kibi
Display the amount of memory in kibibytes. This is the default.

-m, --mebi
Display the amount of memory in mebibytes.

-g, --gibi
Display the amount of memory in gibibytes.

--tebi Display the amount of memory in tebibytes.

--pebi Display the amount of memory in pebibytes.

--kilo Display the amount of memory in kilobytes. Implies --si.

--mega Display the amount of memory in megabytes. Implies --si.

--giga Display the amount of memory in gigabytes. Implies --si.

--tera Display the amount of memory in terabytes. Implies --si.

--peta Display the amount of memory in petabytes. Implies --si.

-h, --human
Show all output fields automatically scaled to shortest three digit unit and display the units of print out. Following units are used.

19) cp :

‘cp’ copies files (or, optionally, directories). The copy is completel\

options::.

‘-a’
‘--archive’
Preserve as much as possible of the structure and attributes of th\
e
original files in the copy (but do not attempt to preserve interna\
l
directory structure; i.e., ‘ls -U’ may list the entries in a copie\
d
directory in a different order). Try to preserve SELinux security
context and extended attributes (xattr), but ignore any failure to
do that and print no corresponding diagnostic. Equivalent to ‘-dR\
--preserve=all’ with the reduced diagnostics.

‘--attributes-only’
Copy only the specified attributes of the source file to the
destination. If the destination already exists, do not alter its
contents. See the ‘--preserve’ option for controlling which
attributes to copy.

‘-b’
‘--backup[=METHOD]’
*Note Backup options::. Make a backup of each file that would
otherwise be overwritten or removed. As a special case, ‘cp’ make\

20) mv :

‘mv’ moves or renames files (or directories).

21) cal :

cal, ncal — displays a calendar and the date of Easter.

22)exit :

exit - cause normal process termination

23) df :

‘df’ reports the amount of disk space used and available on file
systems.

options::.

‘-a’
‘--all’
Include in the listing dummy, duplicate, or inaccessible file
systems, which are omitted by default. Dummy file systems are
typically special purpose pseudo file systems such as ‘/proc’, wit\
h
no associated storage. Duplicate file systems are local or remote
file systems that are mounted at separate locations in the local

file hierarchy, or bind mounted locations. Inaccessible file
systems are those which are mounted but subsequently over-mounted
by another file system at that point, or otherwise inaccessible du\
e
to permissions of the mount point etc.

‘-B SIZE’
‘--block-size=SIZE’
Scale sizes by SIZE before printing them (*note Block size::). Fo\
r
example, ‘-BG’ prints sizes in units of 1,073,741,824 bytes.

‘-h’
‘--human-readable’
Append a size letter to each size, such as ‘M’ for mebibytes.
Powers of 1024 are used, not 1000; ‘M’ stands for 1,048,576 bytes.
This option is equivalent to ‘--block-size=human-readable’. Use
the ‘--si’ option if you prefer powers of 1000.

‘-H’
Equivalent to ‘--si’.

24)dig :

dig - DNS lookup utility

OPTIONS

-4
Use IPv4 only.

-6
Use IPv6 only.

-b address[#port]
Set the source IP address of the query. The address must be
a valid address on one of the host's network interfaces, or
"0.0.0.0" or "::". An optional port may be specified by
appending "#<port>"

-c class
Set the query class. The default class is IN; other classes
are HS for Hesiod records or CH for Chaosnet records.

-f file
Batch mode: dig reads a list of lookup requests to process
from the given file. Each line in the file should be
organized in the same way they would be presented as
queries to dig using the command-line interface.

-i
Do reverse IPv6 lookups using the obsolete RFC1886 IP6.INT
domain, which is no longer in use. Obsolete bit string

label queries (RFC2874) are not attempted.

25) !! :

repeat the last command .