

X. I. E. EXPERIMENTS

Mahim, Mumbai

242466

UNIX

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AIM

TO STUDY PROCESS, DISK AND NETWORK COMMANDS

[PROCESS]

①

ps

SYN

DISPLAYS CURRENTLY RUNNING PROCESSES

ps [options]

-e ⇒ SHOW ALL

-f ⇒ SHOW FULL FORMAT

Eg. ps

②

kill

SYN

TERMINATE A SPECIFIC PROCESS

kill [options] pid

-9 ⇒ TERMINATE FORCEFULLY

-l ⇒ LISTS AVAILABLE SIGNAL NAMES

Eg. kill 1234

[DISK]

③

du

SHOW DISK USAGE

SYN

du [options] [file/directory]

-h ⇒ HUMAN READABLE FORM

-s ⇒ SHOW TOTAL SIZE

Eg. du -h home

④ df
— DISPLAY AVAILABLE AND USED SPACE

AIM

SYN df [options]
-h \Rightarrow HUMAN READABLE FORM
-T \Rightarrow SHOW FILE SYSTEM TYPE

Eg. df -h

[NETWORK]

⑤ ifconfig
— DISPLAYS AND CONFIGURES NETWORK INTERFACE

SYN ifconfig [interface] [options]
-up \Rightarrow ENABLE AN INTERFACE
-down \Rightarrow DISABLES AN INTERFACE

Eg. ifconfig

⑥ w
— DISPLAYS LOGGED-IN USERS

SYN w [options]
-h \Rightarrow HIDE THE HEADER
-s \Rightarrow SHOW SHORT FORMAT

Eg. w

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TO STUDY MEMORY MANAGEMENT COMMANDS

①

free

— DISPLAYS INFO. ABOUT TOTAL, USED AND AVAILABLE MEMORY

free [options]

-h ⇒ HUMAN READABLE FORM

-t ⇒ SHOW MEMORY WITH "RAM" AND "SWAP"

Eg.

free -h

②

/proc/meminfo

— PROVIDES DETAILED MEMORY USAGE FROM KERNEL

SYN

cat /proc/meminfo [options]

-Memtotal ⇒ SHOW TOTAL SYSTEM MEMORY

-Swaptotal ⇒ SHOW TOTAL SWAP MEMORY

Eg.

cat /proc/meminfo | grep Memtotal

③

top

— DISPLAYS REAL-TIME SYSTEM STATISTICS

SYN

top [options]

-u ⇒ FROM A SPECIFIC USER

-o ⇒ FROM A SPECIFIC FIELD

Eg.

top -u root

④

htop

— PROVIDES A DETAILED VIEW OF SYSTEM PROCESSES ALONG WITH BEING INTERACTIVE

SYN htop [options]
→ -u ⇒ PROCESSES FROM A SPECIFIC USER
→ -s ⇒ SORT BY A SPECIFIC COLUMN

Eg. htop -u user1

(8) pagesize
→ DISPLAY
SYN getconf
Eg. pagesize

(5) vmstat
→ DISPLAYS SYSTEM PERFORMANCE, INCLUDING "CPU", MEMORY AND "I/O" STATISTICS

SYN vmstat [options] [delay] [count]
→ -s ⇒ DISPLAY SUMMARY OF MEMORY
→ -d ⇒ DISPLAY DISK STATISTICS

Eg. vmstat -s

du
SHOW
du [

(6) dmidecode
→ RETRIEVES BIOS AND HARDWARE INFORMATION

SYN sudo dmidecode [options]
→ -t ⇒ SHOW INFORMATION FOR A SPECIFIC TYPE
→ -s ⇒ SHOW A SPECIFIC "DMI" STRING

Eg. sudo dmidecode -s bios-version

(10) df
→ DISPLAY
SYN df [

Eg. df

(7) sar
→ COLLECTS, REPORTS AND SAVES SYSTEM PERFORMANCE DATA

SYN sar [options] [interval] [count]
→ -u ⇒ DISPLAY "CPU" USAGE
→ -v ⇒ DISPLAY MEMORY USAGE

Eg. sar -u 2 5

⑧

pagesize

- DISPLAY SIZE OF MEMORY PAGE IN BYTES

SYN

getconf pagesize

Eg.

pagesize

⑨

du

SHOW DISK USAGE

du [options] [file/directory]

-h \Rightarrow HUMAN READABLE FORM

-s \Rightarrow SHOW TOTAL SIZE

du -h home

⑩

df

- DISPLAY AVAILABLE AND USED SPACE

SYN

df [options]

-h \Rightarrow HUMAN READABLE FORM

-T \Rightarrow SHOW FILE SYSTEM TYPE

Eg. df -h

AIM TO STUDY "VI" EDITOR AND ITS COMMANDS

[WHAT IS "Vi" EDITOR]

- THE "Vi" EDITOR IS A POWERFUL TEXT EDITOR IN UNIX/ LINUX SYSTEMS THAT ALLOWS USERS TO CREATE, MODIFY AND MANAGE TEXT FILES EASILY.

Sr. No.	COMMANDS	USE
①	vi [filename]	OPEN A FILE IN "Vi" EDITOR
②	i	INSERT MODE BEFORE CURSOR
③	I	INSERT AT BEGINNING OF LINE
④	a	APPEND AFTER CURSOR
	A	APPEND AT END OF LINE
	b	OPEN NEW BELOW CURSOR
	o	OPEN NEW LINE ABOVE CURSOR
	x	DELETE CHARACTER UNDER THE CURSOR

⑨	dd	DELETE CURRENT LINE	24	j
⑩	dw	DELETE TILL END OF WORD FROM CURSOR	25	h
⑪	d\$	DELETE TILL END OF LINE FROM CURSOR	26	w
⑫	yy	COPY CURRENT LINE	27	v
⑬	p	PASTE AFTER CURSOR	28	
⑭	P	PASTE BEFORE CURSOR	29	
⑮	u	UNDO ACTION	30	
⑯	ctrl+r	REDO ACTION	31	
⑰	G	GO TO LAST LINE OF FILE	32	
⑱	gg	GO TO FIRST LINE OF FILE	33	
⑲	:/pattern	SEARCH FOR A PATTERN IN A FILE	34	
⑳	n	JUMP TO NEXT OCCURANCE OF PATTERN	35	
㉑	:wq	SAVE AND EXIT	36	
㉒	h	MOVE CURSOR LEFT	37	
㉓	l	MOVE CURSOR RIGHT	38	

- | | | |
|------|----------|---|
| (24) | j | MOVE CURSOR DOWN |
| (25) | h | MOVE CURSOR UP |
| (26) | w | MOVE CURSOR TO START OF NEXT WORD |
| (27) | b | MOVE CURSOR TO START OF PREVIOUS WORD |
| (28) | e | MOVE CURSOR TO END OF CURRENT WORD |
| (29) | ↑ | MOVE CURSOR TO BEGINNING OF FILE |
| (30) | ^ | MOVE CURSOR TO FIRST NON-WHITESPACE CHARACTER OF LINE |
| (31) | \$ | MOVE CURSOR TO END OF LINE |
| (32) | H | MOVE CURSOR TO TOP OF SCREEN |
| (33) | M | MOVE CURSOR TO MIDDLE OF SCREEN |
| (34) | L | MOVE CURSOR TO BOTTOM OF SCREEN |
| (35) | ctrl + d | SCROLL HALF PAGE DOWN |
| (36) | ctrl + u | SCROLL HALF PAGE UP |
| (37) | ctrl + f | SCROLL FULL PAGE DOWN |

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- (38) `Ctrl+b` SCROLL FULL PAGE UP
- (39) `v` REPLACE CHARACTER UNDER CURSOR
- (40) `n` ENTER "REPLACE" MODE
- (41) `j` JOIN CURRENT LINE WITH NEXT ONE
- (42) `:set nu` HIDE LINE NUMBERS
- (43) `:wq` SAVE AND EXIT
- (44) `:q!` QUIT "Vi"
- (45) `:w` SAVE FILE
- (46) `:e filename` OPEN ANOTHER FILE IN "Vi"
- (47) `:bn` SWITCH TO NEXT BUFFER FILE
- (48) `:bp` SWITCH TO PREVIOUS BUFFER FILE
- (49) `:help` SHOW HELP FOR A SPECIFIED COMMAND