ps List processes

CONCEPTS

ps takes UNIX options (-ef, with a dash) and BSD options (aux, no dash). They differ in meaning: ps -aux is not ps aux.

Select -e -u -p -C --ppid
↓ which rows
Format -f u -o <cols>
↓ which columns
Sort --sort=-%cpu
↓ order
Filter | grep, | head

ps is a snapshot. For a live view use top; to act on a result, feed the PID to kill.

SELECT PROCESSES

ps
Your processes on this terminal

ps -e / ps -A
All processes

ps -u *<user>*
By effective user

ps -p *<pid>***[,***<pid>***]**
By PID

ps -C *<name>*
By exact command name

ps --ppid *<pid>*
Children of a process

ps -N -u *<user>*
Negate the selection

ps x
Include processes without a tty

OUTPUT FORMATS

ps aux
BSD user-oriented, all

ps -ef
UNIX full format, all

ps -f
Full format (UID, PPID, args)

ps -l
Long format (nice, state, size)

ps -w / ps ww
Do not truncate long lines

OUTPUT FORMATS (cont.)

ps --no-headers
Drop the header line

CUSTOM COLUMNS AND SORTING

ps -eo pid,ppid,user,%cpu,%mem,cmd
Choose your own columns

ps -o pid=,cmd= -p *<pid>*
Column without header

ps L
List all output column names

ps --sort=-%cpu
Highest CPU first

ps --sort=-rss
Largest resident memory first

ps -eo pid,lstart,etime,cmd
Start time and uptime

TREES AND THREADS

ps -ejH
Hierarchy, indented

ps axjf
ASCII-art forest

ps -ef --forest
Forest with full format

ps -eLf
Threads with LWP and NLWP

ps -T -p *<pid>*
Threads of one process

READING THE OUTPUT

STAT first letter

Code	Meaning
R	Running or runnable
S	Sleeping, interruptible
D	Uninterruptible I/O wait
T	Stopped by job control signal
t	Stopped by a debugger
Z	Zombie, awaiting parent
I	Idle kernel thread

%CPU is an average over the whole life of the process, not current load. Use top for what is busy right now.