

CheatSheet: Linux Process

LINUX

- PDF Link: [cheatsheet-process-A4.pdf](#), Category: linux
- Blog URL: <https://cheatsheet.dennyzhang.com/cheatsheet-process-A4>
- Related posts: CheatSheet: Linux Files, CheatSheet: Linux Networking, #denny-cheatsheets

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1.1 Linux Process Status

Status	Type
R Ready or running	TASK_RUNNING(R)
D Uninterruptible sleep (usually IO)	TASK_UNINTERRUPTIBLE(D)
S Interruptible sleep (waiting for an event to complete)	TASK_INTERRUPTIBLE(S)
Z defunct/zombie, terminated but not cleaned up by its parent	TASK_ZOMBIE(Z)
T Execution stopped	TASK_STOPPED(T)
Processes contribute to CPU load	R, D

1.2 Find process

Name	Comment
Sort processes by ram usage	<code>ps -eo size,pid,user,pcpu,command --sort -rss</code>
Sort processes by cpu usage	<code>ps -eo size,pid,user,pcpu,command --sort -pcpu</code>
Get parent process id by pid	<code>ps -o ppid= -p <pid></code>
Find process by name	<code>pgrep <process_name></code>
List zombie processes	See zombie-process.sh
List all process	<code>ps aux, ps axjf</code>

1.3 Top Command

Name	Comment
Top show process full command line	Use <code>c</code> to toggle
Top sort process by memory usage	<code>Shift+m</code>
Top for certain processes	<code>top -p 'pgrep -d "," java'</code>

1.4 Examine process

Name	Comment
Trace system calls and signals by pid	<code>strace -p <pid></code>
List all file handlers by pid	<code>lsof -p <pid></code>
Display process tree by pid	<code>pstree -A -n -p <pid></code>
List all listening ports by pid	See proc-listen-ports.sh
Get process ram usage by pid	<code>sudo pmap -x <pid></code>

1.5 Kill process

Name	Comment
Kill process gracefully	<code>kill <pid>, kill -15 <pid>, kill -TERM <pid></code>
Kill process by force	<code>kill -9 <pid>, kill -KILL <pid></code>
kill process by its full process name	<code>pkill <processname></code>
kill process by it's partial name	<code>pkill -f <process-string></code>
Kill process by process name	<code>killall <process_name></code>

1.6 Explore /proc filesystem

Name	Comment
Check process start command	<code>cat /proc/\$pid/cmdline</code>
Check process environment variables	<code>cat /proc/\$pid/environ</code>
Check process ulimits setting	<code>cat /proc/\$pid/limits</code>
Check cpu utilization	<code>/proc/loadavg</code>
List all partitions	<code>/proc/partitions</code>
List all modules	<code>/proc/modules</code>
List TCP/UDP packages	<code>sudo cat /proc/\$PID/net/nf_conntrack</code>
Get current IP from /proc	See <code>proc-get-ip.sh</code>

1.7 More Resources

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