NAME

pgrep, pkill, pidwait - look up, signal, or wait for processes based on name and other attributes

SYNOPSIS

pgrep [options] pattern

pkill [options] pattern

pidwait [options] pattern

DESCRIPTION

pgrep looks through the currently running processes and lists the process IDs which match the selection criteria to stdout. All the cri? teria have to match. For example,

```
$ pgrep -u root sshd
```

will only list the processes called sshd AND owned by root. On the other hand,

```
$ pgrep -u root,daemon
```

will list the processes owned by root OR daemon.

pkill will send the specified signal (by default SIGTERM) to each process instead of listing them on stdout.

pidwait will wait for each process instead of listing them on stdout.

OPTIONS

-signal

--signal signal

Defines the signal to send to each matched process. Either the numeric or the symbolic signal name can be used. In pgrep or pidwait mode only the long option can be used and has no effect unless used in conjunction with --require-handler to filter to processes with a userspace signal handler present for a particu? lar signal.

-c, --count

Suppress normal output; instead print a count of matching processes. When count does not match anything, e.g. returns zero, the command will return non-zero value. Note that for pkill and pidwait, the count is the number of matching processes, not the processes that were successfully signaled or waited for.

-d, --delimiter delimiter

(by default a newline). (pgrep only.)

-e, --echo

Display name and PID of the process being killed. (pkill only.)

-f, --full

The pattern is normally only matched against the process name. When -f is set, the full command line is used.

-g, --pgroup pgrp,...

Only match processes in the process group IDs listed. Process group 0 is translated into pgrep's, pkill's, or pidwait's own process group.

-G, --group gid,...

Only match processes whose real group ID is listed. Either the numerical or symbolical value may be used.

-i, --ignore-case

Match processes case-insensitively.

-l, --list-name

List the process name as well as the process ID. (pgrep only.)

List the full command line as well as the process ID. (pgrep only.)

-n, --newest

Select only the newest (most recently started) of the matching processes.

-o, --oldest

Select only the oldest (least recently started) of the matching processes.

-O, --older secs

Select processes older than secs.

-P, --parent ppid,...

Only match processes whose parent process ID is listed.

-s, --session sid,...

Only match processes whose process session ID is listed. Ses? sion ID 0 is translated into pgrep's, pkill's, or pidwait's own session ID.

-t, --terminal term,...

Only match processes whose controlling terminal is listed. The

-u, --euid euid,...

Only match processes whose effective user ID is listed. Either the numerical or symbolical value may be used.

-U, --uid uid,...

Only match processes whose real user ID is listed. Either the numerical or symbolical value may be used.

-v, --inverse

Negates the matching. This option is usually used in pgrep's or pidwait's context. In pkill's context the short option is dis? abled to avoid accidental usage of the option.

-w, --lightweight

Shows all thread ids instead of pids in pgrep's or pidwait's context. In pkill's context this option is disabled.

-x, --exact

Only match processes whose names (or command lines if -f is specified) exactly match the pattern.

-F, --pidfile file

Read PIDs from file. This option is more useful for pkill or

-L, --logpidfile

Fail if pidfile (see -F) not locked.

-r, --runstates D,R,S,Z,...

Match only processes which match the process state.

-A, --ignore-ancestors

Ignore all ancestors of pgrep, pkill, or pidwait. For example, this can be useful when elevating with sudo or similar tools.

-H, --require-handler

Only match processes with a userspace signal handler present for the signal to be sent.

--cgroup name,...

Match on provided control group (cgroup) v2 name. See cgroups(8)

--ns pid

Match processes that belong to the same namespaces. Required to run as root to match processes from other users. See --nslist for how to limit which namespaces to match.

--nslist name,...

mnt, net, pid, user, uts.

-q, --queue value

Use sigqueue(3) rather than kill(2) and the value argument is used to specify an integer to be sent with the signal. If the receiving process has installed a handler for this signal using the SA_SIGINFO flag to sigaction(2), then it can obtain this data via the si_value field of the siginfo_t structure.

-V, --version

Display version information and exit.

-h, --help

Display help and exit.

OPERANDS

pattern

Specifies an Extended Regular Expression for matching against the process names or command lines.

EXAMPLES

Example 1: Find the process ID of the named daemon:


```
$ pgrep -u root named
```

Example 2: Make syslog reread its configuration file:

```
$ pkill -HUP syslogd
```

Example 3: Give detailed information on all xterm processes:

```
$ ps -fp $(pgrep -d, -x xterm)
```

Example 4: Make all chrome processes run nicer:

```
$ renice +4 $(pgrep chrome)
```

EXIT STATUS

0 One or more processes matched the criteria. For pkill and pid? wait, one or more processes must also have been successfully signalled or waited for.

1 No processes matched or none of them could be signalled.

2 Syntax error in the command line.

3 Fatal error: out of memory etc.

NOTES

The process name used for matching is limited to the 15 characters present in the output of /proc/pid/stat. Use the -f option to match against the complete command line, /proc/pid/cmdline. Threads may not

command line.

The running pgrep, pkill, or pidwait process will never report itself as a match.

The -O --older option will silently fail if /proc is mounted with the subset=pid option.

BUGS

The options -n and -o and -v can not be combined. Let me know if you need to do this.

Defunct processes are reported.

pidwait requires the pidfd_open(2) system call which first appeared in Linux 5.3.

SEE ALSO

ps(1), regex(7), signal(7), sigqueue(3), killall(1), skill(1), kill(1), kill(2), cgroups(8).

AUTHOR

Kjetil Torgrim Homme

Please send bug reports to procps@freelists.org