NAME

timeout — signal command after delays

SYNOPSIS

timeout [**-fpv**] [**-s** *signal*] [**-k** *kill-after*] *signal-after program* [*argument*]...

DESCRIPTION

Executes *program arguments*, but sends it *signal* (default SIGTERM) after *signal-after*, and SIGKILL after an additional delay of *kill-after*, if specified.

If **-f** is not specified, **timeout** becomes the process group leader and sends signals to the process group: this has the added benefit of signaling all of the *program*'s children.

Additionally, it will also forward all instances of every signal that terminates the receiver by default (SIGTERM, SIGINT, SIGHUP, SIGQUIT, &c.) and the specified *signal* it receives to the child (or process group).

All times are monotonic. All sent signals are followed by a SIGCONT. Delays of **0** disable the corresponding timer.

OPTIONS

-f, **--foreground**	Signal the child directly, do not become the process group leader.
-p, **--preserve-status**	Return the child's exit status or re-raise the deadly signal instead of exiting **124** when the child dies after timing out.
-v, **--verbose**	Log all signals being sent to the standard error stream.
-s, **--signal**=*signal*	Send *signal* instead of SIGTERM after *signal-after* expires.
-k, **--kill-after**=*duration*	Send SIGKILL *duration* after *signal-after*.

Time Intervals

signal-after and *kill-after* are floating-point amounts of seconds, optionally suffixed with one of the following cumulative multipliers:

s(econds)	**1**
m(inutes)	**60**
h(hours)	**60**
d(ays)	**24**
w(eeks)	**7**
y(ears)	**365.25 / 7**

This is the same format as in sleep(1).

Signal Name

If *signal* starts with a digit, it's presumed to be a numerical signal value. Otherwise, if it starts with "**SIG**", that prefix is stripped for the purposes of further matching. All string comparisons are case-insensitive.

On platforms with sys_signame(3) (the BSD), *signal* is matched directly to the array.

Elsewhere, it's matched to the signal names known at compile time; the null signal is known as "Signal 0". Real-time signals, if any, can be specified in the format "**RT***integer*", where *integer* is a decimal number (NetBSD-style), or "**RTMIN+***integer*" and "**RTMAX-***integer*" (procps-style). Real-time signals must fall in [SIGRTMIN, SIGRTMAX] to be accepted.

ENVIRONMENT

PATH In which *program* is searched; confer execvp(3).

SIGNALS

SIGTERM, SIGINT, SIGHUP, SIGQUIT, all other deadly signals, *signal*	Caught and forwarded to the child (or process group).
SIGTTIN, SIGTTOU	Ignored: this means that "**timeout** *1* **cat** &" will not stop, while "**cat** &" would; confer termios(4).

The child's signal dispositions and mask are unaffected.

EXIT STATUS

125	Couldn't fork.
124	If **-p** wasn't specified: *program* exited after *signal* was sent
None, deadly signal re-raised	*program* died to a signal.
127	*program* wasn't found.
126	*program* exists, but couldn't be executed for a different reason.
All others	forwarded from *program* if **-p** or if it exited normally before *signal-after*.

EXAMPLES

Limit a command to a second of run-time:

```
$ timeout 1 sleep 20
$ echo $?
124
$ timeout -p 1 sleep 20
Terminated
$ echo $?
143
```

Emulate pipe shutter after a half-minute:

```
$ timeout -vfsPIPE 0.5m yes | wc
timeout: yes (3558706): sending SIGPIPE
11462975 11462975 22925950
```

Note the **-f**, as otherwise **timeout** would also kill the **wc**.

Resort to killing:

```
$ timeout -vk1s -sHUP 1 nohup sleep 20
nohup: <&- >> nohup.out 2>&1
timeout: nohup (group): sending SIGHUP
timeout: nohup (group): sending SIGKILL
Killed
$ echo $?
137
```

Note, how, despite the absence of **-p**, the exit status appears to be **137** — this is because SIGKILL is unblockable, and, when sent to the process group, arrived to **timeout** itself, since under an interactive shell, each pipeline is a process group.

SEE ALSO

signal(7), **kill -l** for a list of available signals.
credentials(7) for the implications of **timeout** becoming a process group leader.

STANDARDS

IEEE Std 1003.1-2024 ("POSIX.1"); **-v** is an extension, originating from the GNU system. The standard specifies **smhd Time Intervals**' suffixes and matches *signal*s case-insensitively by the part after SIG, and without real-time signals.

SIGALRM may cause **timeout** to behave as-if the *signal-after* or **--kill-after** timers elapsed, rather than forwarding it. The standard doesn't specify the clock: this implementation uses CLOCK_MONOTONIC, some implementations use CLOCK_REALTIME, which makes them subject to NTP and date adjustments. The standard allows **timeout** to reset the disposition of *signal* to no longer be ignored.

HISTORY

Originates from the GNU system in coreutils 7.0; also present in NetBSD 7.0 and FreeBSD 11.0, although those versions miss **-v** and un-SIG-prefixed **-s**.

IEEE Std 1003.1-2024 (“POSIX.1”) invents **timeout**, as present-day.