

NAME

tkill, tkill – send a signal to a thread

SYNOPSIS

```
int tkill(int tid, int sig);
```

```
int tkill(int tgid, int tid, int sig);
```

Note: There is no glibc wrapper for **tkill()**; see NOTES.

DESCRIPTION

tkill() sends the signal *sig* to the thread with the thread ID *tid* in the thread group *tgid*. (By contrast, **kill(2)** can be used to send a signal only to a process (i.e., thread group) as a whole, and the signal will be delivered to an arbitrary thread within that process.)

tkill() is an obsolete predecessor to **tkill()**. It allows only the target thread ID to be specified, which may result in the wrong thread being signaled if a thread terminates and its thread ID is recycled. Avoid using this system call.

These are the raw system call interfaces, meant for internal thread library use.

RETURN VALUE

On success, zero is returned. On error, `-1` is returned, and *errno* is set appropriately.

ERRORS**EINVAL**

An invalid thread ID, thread group ID, or signal was specified.

EPERM

Permission denied. For the required permissions, see **kill(2)**.

ESRCH

No process with the specified thread ID (and thread group ID) exists.

EAGAIN

The **RLIMIT_SIGPENDING** resource limit was reached and *sig* is a real-time signal.

EAGAIN

Insufficient kernel memory was available and *sig* is a real-time signal.

VERSIONS

tkill() is supported since Linux 2.4.19 / 2.5.4. **tkill()** was added in Linux 2.5.75.

Library support for **tkill()** was added to glibc in version 2.30.

CONFORMING TO

tkill() and **tkill()** are Linux-specific and should not be used in programs that are intended to be portable.

NOTES

See the description of **CLONE_THREAD** in **clone(2)** for an explanation of thread groups.

Glibc does not provide a wrapper for **tkill()**; call it using **syscall(2)**. Before glibc 2.30, there was also no wrapper function for **tkill()**.

SEE ALSO

clone(2), **gettid(2)**, **kill(2)**, **rt_sigqueueinfo(2)**

COLOPHON

This page is part of release 5.02 of the Linux *man-pages* project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at <https://www.kernel.org/doc/man-pages/>.