



Rocky Enterprise Linux 9.2 Manual Pages on command 'set_tid_address.2'

C:\>man set_tid_address.2

SET_TID_ADDRESS(2) Linux Programmer's Manual SET_TID_ADDRESS(2)

NAME

set_tid_address - set pointer to thread ID

SYNOPSIS

```
#include <linux/unistd.h>
```

```
long set_tid_address(int *tidptr);
```

Note: There is no glibc wrapper for this system call; see NOTES.

DESCRIPTION

For each thread, the kernel maintains two attributes (addresses) called `set_child_tid` and `clear_child_tid`. These two attributes contain the value `NULL` by default.

`set_child_tid`

If a thread is started using `clone(2)` with the `CLONE_CHILD_SETTID` flag, `set_child_tid` is set to the value passed in the `ctid` argument of that system call.

When `set_child_tid` is set, the very first thing the new thread does is to write its thread ID at this address.

`clear_child_tid`

If a thread is started using `clone(2)` with the `CLONE_CHILD_CLEARTID` flag, `clear_child_tid` is set to the value passed in the `ctid` argument of that sys?

tem call.

The system call `set_tid_address()` sets the `clear_child_tid` value for the calling

thread to tidptr.

When a thread whose `clear_child_tid` is not NULL terminates, then, if the thread is sharing memory with other threads, then 0 is written at the address specified in `clear_child_tid` and the kernel performs the following operation:

```
futex(clear_child_tid, FUTEX_WAKE, 1, NULL, NULL, 0);
```

The effect of this operation is to wake a single thread that is performing a futex wait on the memory location. Errors from the futex wake operation are ignored.

RETURN VALUE

`set_tid_address()` always returns the caller's thread ID.

ERRORS

`set_tid_address()` always succeeds.

VERSIONS

This call is present since Linux 2.5.48. Details as given here are valid since Linux 2.5.49.

CONFORMING TO

This system call is Linux-specific.

NOTES

Glibc does not provide a wrapper for this system call; call it using `syscall(2)`.

SEE ALSO

`clone(2)`, `futex(2)`, `gettid(2)`

COLOPHON

This page is part of release 5.05 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/>.