



Linux Ubuntu 26.04 Manual Pages on command 'prctl.2'

\$ man prctl.2

prctl(2) System Calls Manual prctl(2)

NAME

prctl - operations on a process or thread

LIBRARY

Standard C library (libc, -lc)

SYNOPSIS

```
#include <linux/prctl.h> /* Definition of PR_* constants */
```

```
#include <sys/prctl.h>
```

```
int prctl(int op, ...);
```

DESCRIPTION

prctl() manipulates various aspects of the behavior of the calling thread or process.

prctl() is called with a first argument describing what to do, and further arguments with a significance depending on the first one. The first argument can be:

PR_CAP_AMBIENT

PR_CAPBSET_READ

PR_CAPBSET_DROP

PR_SET_CHILD_SUBREAPER

PR_GET_CHILD_SUBREAPER

PR_SET_DUMPABLE

PR_GET_DUMPABLE

PR_SET_ENDIAN

PR_GET_ENDIAN

PR_SET_FP_MODE

PR_GET_FP_MODE
PR_SET_FPEMU
PR_GET_FPEMU
PR_SET_FPEXC
PR_GET_FPEXC
PR_SET_IO_FLUSHES
PR_GET_IO_FLUSHES
PR_SET_KEEPCAPS
PR_GET_KEEPCAPS
PR_MCE_KILL
PR_MCE_KILL_GET
PR_SET_MM
PR_SET_VMA
PR_MPX_ENABLE_MANAGEMENT
PR_MPX_DISABLE_MANAGEMENT
PR_SET_NAME
PR_GET_NAME
PR_SET_NO_NEW_PRIVS
PR_GET_NO_NEW_PRIVS
PR_PAC_RESET_KEYS
PR_SET_PDEATHSIG
PR_GET_PDEATHSIG
PR_SET_PTRACER
PR_SET_SECCOMP
PR_GET_SECCOMP
PR_SET_SECUREBITS
PR_GET_SECUREBITS
PR_GET_SPECULATION_CTRL
PR_SET_SPECULATION_CTRL
PR_SVE_SET_VL
PR_SVE_GET_VL
PR_SET_SYSCALL_USER_DISPATCH
PR_SET_TAGGED_ADDR_CTRL

PR_GET_TAGGED_ADDR_CTRL
PR_TASK_PERF_EVENTS_DISABLE
PR_TASK_PERF_EVENTS_ENABLE
PR_SET_THP_DISABLE
PR_GET_THP_DISABLE
PR_GET_TID_ADDRESS
PR_SET_TIMERSLACK
PR_GET_TIMERSLACK
PR_SET_TIMING
PR_GET_TIMING
PR_SET_TSC
PR_GET_TSC
PR_SET_UNALIGN
PR_GET_UNALIGN
PR_GET_AUXV
PR_SET_MDWE
PR_GET_MDWE
PR_RISCV_SET_ICACHE_FLUSH_CTX
PR_FUTEX_HASH

RETURN VALUE

On success, a nonnegative value is returned. On error, -1 is returned, and `errno` is set to indicate the error.

ERRORS

EINVAL The value of `op` is not recognized, or not supported on this system.

EINVAL An unused argument is nonzero.

VERSIONS

IRIX has a `prctl()` system call (also introduced in Linux 2.1.44 as `irix_prctl` on the MIPS architecture), with prototype

```
ptrdiff_t prctl(int op, int arg2, int arg3);
```

and operations to get the maximum number of processes per user, get the maximum number of processors the calling process can use, find out whether a specified process is currently blocked, get or set the maximum stack size, and so on.

STANDARDS

Linux.

HISTORY

Linux 2.1.57, glibc 2.0.6

CAVEATS

The prototype of the libc wrapper uses a variadic argument list. This makes it necessary to pass the arguments with the right width. When passing numeric constants, such as 0, use a suffix: 0L.

Careless use of some `prctl()` operations can confuse the user-space run-time environment, so these operations should be used with care.

SEE ALSO

`signal(2)`, `PR_CAP_AMBIENT(2const)`, `PR_CAPBSET_READ(2const)`, `PR_CAPBSET_DROP(2const)`,
`PR_SET_CHILD_SUBREAPER(2const)`, `PR_GET_CHILD_SUBREAPER(2const)`, `PR_SET_DUMPABLE(2const)`,
`PR_GET_DUMPABLE(2const)`, `PR_SET_ENDIAN(2const)`, `PR_GET_ENDIAN(2const)`,
`PR_SET_FP_MODE(2const)`, `PR_GET_FP_MODE(2const)`, `PR_SET_FPEMU(2const)`, `PR_GET_FPEMU(2const)`,
`PR_SET_FPEXC(2const)`, `PR_GET_FPEXC(2const)`, `PR_SET_IO_FLUSHER(2const)`,
`PR_GET_IO_FLUSHER(2const)`, `PR_SET_KEEPCAPS(2const)`, `PR_GET_KEEPCAPS(2const)`,
`PR_MCE_KILL(2const)`, `PR_MCE_KILL_GET(2const)`, `PR_SET_MM(2const)`, `PR_SET_VMA(2const)`,
`PR_MPX_ENABLE_MANAGEMENT(2const)`, `PR_MPX_DISABLE_MANAGEMENT(2const)`,
`PR_SET_NAME(2const)`,
`PR_GET_NAME(2const)`, `PR_SET_NO_NEW_PRIVS(2const)`, `PR_GET_NO_NEW_PRIVS(2const)`, `PR_PAC_RE?`
`SET_KEYS(2const)`, `PR_SET_PDEATHSIG(2const)`, `PR_GET_PDEATHSIG(2const)`,
`PR_SET_PTRACER(2const)`, `PR_SET_SECCOMP(2const)`, `PR_GET_SECCOMP(2const)`, `PR_SET_SE?`
`CUREBITS(2const)`, `PR_GET_SECUREBITS(2const)`, `PR_SET_SPECULATION_CTRL(2const)`, `PR_GET_SPECU?`
`LATION_CTRL(2const)`, `PR_SVE_SET_VL(2const)`, `PR_SVE_GET_VL(2const)`, `PR_SET_SYSCALL_USER_DIS?`
`PATCH(2const)`, `PR_SET_TAGGED_ADDR_CTRL(2const)`, `PR_GET_TAGGED_ADDR_CTRL(2const)`,
`PR_TASK_PERF_EVENTS_DISABLE(2const)`, `PR_TASK_PERF_EVENTS_ENABLE(2const)`, `PR_SET_THP_DIS?`
`ABLE(2const)`, `PR_GET_THP_DISABLE(2const)`, `PR_GET_TID_ADDRESS(2const)`, `PR_SET_TIMER?`
`SLACK(2const)`, `PR_GET_TIMERSLACK(2const)`, `PR_SET_TIMING(2const)`, `PR_GET_TIMING(2const)`,
`PR_SET_TSC(2const)`, `PR_GET_TSC(2const)`, `PR_SET_UNALIGN(2const)`, `PR_GET_UNALIGN(2const)`,
`PR_GET_AUXV(2const)`, `PR_SET_MDWE(2const)`, `PR_GET_MDWE(2const)`,
`PR_RISCV_SET_ICACHE_FLUSH_CTX(2const)`, `PR_FUTEX_HASH(2const)`, `core(5)`