

NAME

nice – change process priority

SYNOPSIS

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

```
int nice(int inc);
```

Feature Test Macro Requirements for glibc (see **feature_test_macros(7)**):

```
nice(): _XOPEN_SOURCE
|| /* Since glibc 2.19: */ _DEFAULT_SOURCE
|| /* Glibc versions <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE
```

DESCRIPTION

nice() adds *inc* to the nice value for the calling thread. (A higher nice value means a low priority.)

The range of the nice value is +19 (low priority) to -20 (high priority). Attempts to set a nice value outside the range are clamped to the range.

Traditionally, only a privileged process could lower the nice value (i.e., set a higher priority). However, since Linux 2.6.12, an unprivileged process can decrease the nice value of a target process that has a suitable **RLIMIT_NICE** soft limit; see **getrlimit(2)** for details.

RETURN VALUE

On success, the new nice value is returned (but see NOTES below). On error, -1 is returned, and *errno* is set appropriately.

A successful call can legitimately return -1. To detect an error, set *errno* to 0 before the call, and check whether it is nonzero after **nice()** returns -1.

ERRORS**EPERM**

The calling process attempted to increase its priority by supplying a negative *inc* but has insufficient privileges. Under Linux, the **CAP_SYS_NICE** capability is required. (But see the discussion of the **RLIMIT_NICE** resource limit in **setrlimit(2)**.)

CONFORMING TO

POSIX.1-2001, POSIX.1-2008, SVr4, 4.3BSD. However, the raw system call and (g)libc (earlier than glibc 2.2.4) return value is nonstandard, see below.

NOTES

For further details on the nice value, see **sched(7)**.

Note: the addition of the "autogroup" feature in Linux 2.6.38 means that the nice value no longer has its traditional effect in many circumstances. For details, see **sched(7)**.

C library/kernel differences

POSIX.1 specifies that **nice()** should return the new nice value. However, the raw Linux system call returns 0 on success. Likewise, the **nice()** wrapper function provided in glibc 2.2.3 and earlier returns 0 on success.

Since glibc 2.2.4, the **nice()** wrapper function provided by glibc provides conformance to POSIX.1 by calling **getpriority(2)** to obtain the new nice value, which is then returned to the caller.

SEE ALSO

nice(1), **renice(1)**, **fork(2)**, **getpriority(2)**, **getrlimit(2)**, **setpriority(2)**, **capabilities(7)**, **sched(7)**

COLOPHON

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