



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

\$ man nice.2

nice(2) System Calls Manual nice(2)

NAME

nice - change process priority

LIBRARY

Standard C library (libc, -lc)

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 <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE
```

DESCRIPTION

nice() adds inc to the nice value for the calling thread. (A higher nice value means a lower 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 VERSIONS below). On error, -1 is re?

turned, and `errno` is set to indicate the error.

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 increment 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)`.)

VERSIONS

C library/kernel differences

POSIX.1 specifies that `nice()` should return the new nice value. However, the raw Linux `sys?tem` 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.

STANDARDS

POSIX.1-2024.

HISTORY

POSIX.1-2001, SVr4, 4.3BSD.

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)`.

SEE ALSO

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