



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

\$ man gethostname.2

gethostname(2) System Calls Manual gethostname(2)

NAME

gethostname, sethostname - get/set hostname

LIBRARY

Standard C library (libc, -lc)

SYNOPSIS

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

```
int gethostname(char *name, size_t size);
```

```
int sethostname(const char *name, size_t size);
```

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

gethostname():

```
_XOPEN_SOURCE >= 500 || _POSIX_C_SOURCE >= 200112L
```

```
|| /* glibc 2.19 and earlier */ _BSD_SOURCE
```

sethostname():

Since glibc 2.21:

```
_DEFAULT_SOURCE
```

In glibc 2.19 and 2.20:

```
_DEFAULT_SOURCE || (_XOPEN_SOURCE && _XOPEN_SOURCE < 500)
```

Up to and including glibc 2.19:

```
_BSD_SOURCE || (_XOPEN_SOURCE && _XOPEN_SOURCE < 500)
```

DESCRIPTION

These system calls are used to access or to change the system hostname. More precisely, they operate on the hostname associated with the calling process's UTS namespace.

sethostname() sets the hostname to the value given in the character array name. The size argument specifies the number of bytes in name. (Thus, name does not require a terminating null byte.)

gethostname() returns the null-terminated hostname in the character array name, which has a size of size bytes. If the null-terminated hostname is too large to fit, then the name is truncated, and no error is returned (but see VERSIONS below). POSIX.1 says that if such truncation occurs, then it is unspecified whether the returned buffer includes a terminating null byte.

RETURN VALUE

On success, zero is returned. On error, -1 is returned, and errno is set to indicate the error.

ERRORS

EFAULT name is an invalid address.

EINVAL size is negative or, for sethostname(), size is larger than the maximum allowed size.

ENAMETOOLONG

(glibc gethostname()) size is smaller than the actual size. (Before glibc 2.1, glibc uses EINVAL for this case.)

EPERM For sethostname(), the caller did not have the CAP_SYS_ADMIN capability in the user namespace associated with its UTS namespace (see namespaces(7)).

VERSIONS

SUSv2 guarantees that "Host names are limited to 255 bytes". POSIX.1 guarantees that "Host names (not including the terminating null byte) are limited to HOST_NAME_MAX bytes". On Linux, HOST_NAME_MAX is defined with the value 64, which has been the limit since Linux 1.0 (earlier kernels imposed a limit of 8 bytes).

C library/kernel differences

The GNU C library does not employ the gethostname() system call; instead, it implements gethostname() as a library function that calls uname(2) and copies up to size bytes from the returned nodename field into name. Having performed the copy, the function then checks if the length of the nodename was greater than or equal to size, and if it is, then the function returns -1 with errno set to ENAMETOOLONG; in this case, a terminating null byte is not included in the returned name.

STANDARDS

gethostname()

POSIX.1-2024.

sethostname()

None.

HISTORY

gethostname()

4.2BSD, SVr4, POSIX.1-2001.

sethostname()

4.2BSD, SVr4.

Versions of glibc before glibc 2.2 handle the case where the length of the nodename was greater than or equal to size differently: nothing is copied into name and the function returns -1 with errno set to ENAMETOOLONG.

SEE ALSO

hostname(1), getdomainname(2), setdomainname(2), uname(2), uts_namespaces(7)

Linux man-pages 6.17

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