NAME
>   uname - get name and information about current kernel

SYNOPSIS
>   **#include <sys/utsname.h>**
>
>   **int uname(struct utsname *****buf** **);**

DESCRIPTION
>   **uname**() returns system information in the structure pointed to by *buf* . The *utsname* struct is defined in
>   *<sys/utsname.h>*:

>   struct utsname {
>   char sysname[]; /* Operating system name (e.g., "Linux") */
>   char nodename[]; /* Name within "some implementation-defined
>   network" */
>   char release[]; /* Operating system release (e.g., "2.6.28") */
>   char version[]; /* Operating system version */
>   char machine[]; /* Hardware identifier */
>   #ifdef _GNU_SOURCE
>   char domainname[]; /* NIS or YP domain name */
>   #endif
>   };

>   The length of the arrays in a *struct utsname* is unspecified (see NOTES); the fields are terminated by a null
>   byte ('\0').

RETURN VALUE
>   On success, zero is returned. On error, -1 is returned, and *errno* is set appropriately.

ERRORS
>   **EFAULT**
>   *buf* is not valid.

CONFORMING TO
>   POSIX.1-2001, POSIX.1-2008, SVr4. There is no **uname**() call in 4.3BSD.

>   The *domainname* member (the NIS or YP domain name) is a GNU extension.

NOTES
>   This is a system call, and the operating system presumably knows its name, release and version. It also
>   knows what hardware it runs on. So, four of the fields of the struct are meaningful. On the other hand, the
>   field *nodename* is meaningless: it gives the name of the present machine in some undefined network, but
>   typically machines are in more than one network and have several names. Moreover, the kernel has no way
>   of knowing about such things, so it has to be told what to answer here. The same holds for the additional
>   *domainname* field.

>   To this end, Linux uses the system calls sethostname(2) and setdomainname(2). Note that there is no stan-
>   dard that says that the hostname set by sethostname(2) is the same string as the *nodename* field of the struct
>   returned by **uname**() (indeed, some systems allow a 256-byte hostname and an 8-byte nodename), but this
>   is true on Linux. The same holds for setdomainname(2) and the *domainname* field.

>   The length of the fields in the struct varies. Some operating systems or libraries use a hardcoded 9 or 33 or
>   65 or 257. Other systems use **SYS_NMLN** or **_SYS_NMLN** or **UTSLEN** or **_UTSNAME_LENGTH**.
>   Clearly, it is a bad idea to use any of these constants; just use sizeof(...). Often 257 is chosen in order to
>   have room for an internet hostname.

>   Part of the utsname information is also accessible via */proc/sys/kernel/*{*ostype*, *hostname*, *osrelease*, *ver-
>   sion*, *domainname*}.

>   **C library/kernel differences**
>   Over time, increases in the size of the *utsname* structure have led to three successive versions of **uname**():
>   *sys_olduname*() (slot *__NR_oldolduname*), *sys_uname*() (slot *__NR_olduname*), and *sys_newuname*() (slot

__NR_uname). The first one used length 9 for all fields; the second used 65; the third also uses 65 but adds the *domainname* field. The glibc **uname**() wrapper function hides these details from applications, invoking the most recent version of the system call provided by the kernel.

SEE ALSO

uname(1), getdomainname(2), gethostname(2), namespaces(7)

COLOPHON

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