

NAME

getxattr, lgetxattr, fgetxattr – retrieve an extended attribute value

SYNOPSIS

```
#include <sys/types.h>
#include <sys/xattr.h>

ssize_t getxattr(const char *path, const char *name,
                 void *value, size_t size);
ssize_t lgetxattr(const char *path, const char *name,
                  void *value, size_t size);
ssize_t fgetxattr(int fd, const char *name,
                  void *value, size_t size);
```

DESCRIPTION

Extended attributes are *name:value* pairs associated with inodes (files, directories, symbolic links, etc.). They are extensions to the normal attributes which are associated with all inodes in the system (i.e., the **stat(2)** data). A complete overview of extended attributes concepts can be found in **xattr(7)**.

getxattr() retrieves the value of the extended attribute identified by *name* and associated with the given *path* in the filesystem. The attribute value is placed in the buffer pointed to by *value*; *size* specifies the size of that buffer. The return value of the call is the number of bytes placed in *value*.

lgetxattr() is identical to **getxattr()**, except in the case of a symbolic link, where the link itself is interrogated, not the file that it refers to.

fgetxattr() is identical to **getxattr()**, only the open file referred to by *fd* (as returned by **open(2)**) is interrogated in place of *path*.

An extended attribute *name* is a null-terminated string. The name includes a namespace prefix; there may be several, disjoint namespaces associated with an individual inode. The value of an extended attribute is a chunk of arbitrary textual or binary data that was assigned using **setxattr(2)**.

If *size* is specified as zero, these calls return the current size of the named extended attribute (and leave *value* unchanged). This can be used to determine the size of the buffer that should be supplied in a subsequent call. (But, bear in mind that there is a possibility that the attribute value may change between the two calls, so that it is still necessary to check the return status from the second call.)

RETURN VALUE

On success, these calls return a nonnegative value which is the size (in bytes) of the extended attribute value. On failure, -1 is returned and *errno* is set appropriately.

ERRORS

E2BIG The size of the attribute value is larger than the maximum size allowed; the attribute cannot be retrieved. This can happen on filesystems that support very large attribute values such as NFSv4, for example.

ENODATA

The named attribute does not exist, or the process has no access to this attribute.

ENOTSUP

Extended attributes are not supported by the filesystem, or are disabled.

ERANGE

The *size* of the *value* buffer is too small to hold the result.

In addition, the errors documented in **stat(2)** can also occur.

VERSIONS

These system calls have been available on Linux since kernel 2.4; glibc support is provided since version 2.3.

CONFORMING TO

These system calls are Linux-specific.

EXAMPLE

See **listxattr(2)**.

SEE ALSO

getfattr(1), **setfattr(1)**, **listxattr(2)**, **open(2)**, **removexattr(2)**, **setxattr(2)**, **stat(2)**, **symlink(7)**, **xattr(7)**

COLOPHON

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