

**NAME**

setfsgid – set group identity used for file system checks

**SYNOPSIS**

```
#include <unistd.h> /* glibc uses <sys/fsuid.h> */
```

```
int setfsgid(uid_t fsgid);
```

**DESCRIPTION**

The system call **setfsgid()** sets the group ID that the Linux kernel uses to check for all accesses to the file system. Normally, the value of *fsgid* will shadow the value of the effective group ID. In fact, whenever the effective group ID is changed, *fsgid* will also be changed to the new value of the effective group ID.

Explicit calls to **setfsuid(2)** and **setfsgid()** are usually only used by programs such as the Linux NFS server that need to change what user and group ID is used for file access without a corresponding change in the real and effective user and group IDs. A change in the normal user IDs for a program such as the NFS server is a security hole that can expose it to unwanted signals. (But see below.)

**setfsgid()** will only succeed if the caller is the superuser or if *fsgid* matches either the real group ID, effective group ID, saved set-group-ID, or the current value of *fsgid*.

**RETURN VALUE**

On success, the previous value of *fsgid* is returned. On error, the current value of *fsgid* is returned.

**VERSIONS**

This system call is present in Linux since version 1.2.

**CONFORMING TO**

**setfsgid()** is Linux-specific and should not be used in programs intended to be portable.

**NOTES**

When glibc determines that the argument is not a valid group ID, it will return `-1` and set *errno* to **EINVAL** without attempting the system call.

Note that at the time this system call was introduced, a process could send a signal to a process with the same effective user ID. Today signal permission handling is slightly different.

**BUGS**

No error messages of any kind are returned to the caller. At the very least, **EPERM** should be returned when the call fails (because the caller lacks the **CAP\_SETGID** capability).

**SEE ALSO**

**kill(2)**, **setfsuid(2)**, **capabilities(7)**, **credentials(7)**

**COLOPHON**

This page is part of release 3.22 of the Linux *man-pages* project. A description of the project, and information about reporting bugs, can be found at <http://www.kernel.org/doc/man-pages/>.