NAME

setuid, setegid, seteuid, setgid – set user and group IDs

SYNOPSIS

#include <sys/types.h>
#include <unistd.h>

int setuid(uid_t *uid***);**

int setegid(gid_t *egid***);**

int seteuid(uid_t *euid***);**

int setgid(gid_t *gid***);**

MT-LEVEL

setuid( )and**setgid( )** are Async-Signal-Safe

DESCRIPTION

The **setuid( )** function sets the real user ID, effective user ID, and saved user ID of the calling process. The **setgid( )** function sets the real group ID, effective group ID, and saved group ID of the calling process. The **setegid( )** and **seteuid( )** functions set the effective group and user ID's respectively for the calling process. See **intro**(2) for more information on real, effective, and saved user and group IDs.

At login time, the real user ID, effective user ID, and saved user ID of the login process are set to the login ID of the user responsible for the creation of the process. The same is true for the real, effective, and saved group IDs; they are set to the group ID of the user responsible for the creation of the process.

When a process calls **exec**(2) to execute a file (program), the user and/or group identifiers associated with the process can change. If the file executed is a set-user-ID file, the effective and saved user IDs of the process are set to the owner of the file executed. If the file executed is a set-group-ID file, the effective and saved group IDs of the process are set to the group of the file executed. If the file executed is not a set-user-ID or set-group-ID file, the effective user ID, saved user ID, effective group ID, and saved group ID are not changed.

The following subsections describe the behavior of **setuid( )** and **setgid( )** with respect to the three types of user and group IDs.

If the effective user ID of the process calling **setuid( )** is the super-user, the real, effective, and saved user IDs are set to the *uid* parameter.

If the effective user ID of the calling process is not the super-user, but *uid* is either the real user ID or the saved user ID of the calling process, the effective user ID is set to *uid*.

If the effective user ID of the process calling **setgid( )** is the super-user, the real, effective, and saved group IDs are set to the *gid* parameter.

If the effective user ID of the calling process is not the super-user, but *gid* is either the real group ID or the saved group ID of the calling process, the effective group ID is set to *gid*.

RETURN VALUES

Upon successful completion, a value of 0 is returned. Otherwise, a value of –1 is returned and **errno** is set to indicate the error.

ERRORS

setuid( ) and **setgid( )** fail if one or more of the following is true:

EINVAL The *uid* or *gid* is out of range.

EPERM For **setuid( )** and **seteuid( )** the effective user of the calling process is not super-user, and the *uid* parameter does not match either the real or saved user IDs. For **setgid( )** and **setegid( )** the effective user of the calling process is not the super-user, and the *gid* parameter does not match either the real or saved group IDs.

SEE ALSO

intro(2), **exec**(2), **getgroups**(2), **getuid**(2), **stat**(5)