

NAME

setuid – set user identity

SYNOPSIS

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

```
int setuid(uid_t uid);
```

DESCRIPTION

setuid() sets the effective user ID of the calling process. If the effective UID of the caller is root, the real UID and saved set-user-ID are also set.

Under Linux, **setuid()** is implemented like the POSIX version with the **_POSIX_SAVED_IDS** feature. This allows a set-user-ID (other than root) program to drop all of its user privileges, do some un-privileged work, and then re-engage the original effective user ID in a secure manner.

If the user is root or the program is set-user-ID-root, special care must be taken. The **setuid()** function checks the effective user ID of the caller and if it is the superuser, all process-related user ID's are set to *uid*. After this has occurred, it is impossible for the program to regain root privileges.

Thus, a set-user-ID-root program wishing to temporarily drop root privileges, assume the identity of a non-root user, and then regain root privileges afterwards cannot use **setuid()**. You can accomplish this with the (non-POSIX, BSD) call **seteuid(2)**.

RETURN VALUE

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

ERRORS**EAGAIN**

The *uid* does not match the current uid and *uid* brings process over its **RLIMIT_NPROC** resource limit.

EPERM

The user is not privileged (Linux: does not have the **CAP_SETUID** capability) and *uid* does not match the real UID or saved set-user-ID of the calling process.

CONFORMING TO

SVr4, POSIX.1-2001. Not quite compatible with the 4.4BSD call, which sets all of the real, saved, and effective user IDs.

NOTES**Linux Notes**

Linux has the concept of file system user ID, normally equal to the effective user ID. The **setuid()** call also sets the file system user ID of the calling process. See **setfsuid(2)**.

If *uid* is different from the old effective uid, the process will be forbidden from leaving core dumps.

SEE ALSO

getuid(2), **seteuid(2)**, **setfsuid(2)**, **setreuid(2)**, **capabilities(7)**, **credentials(7)**

COLOPHON

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