

NAME

getgrent, setgrent, endgrent – get group file entry

LIBRARY

Standard C library (*libc*, *-lc*)

SYNOPSIS

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

struct group *getgrent(void);
void setgrent(void);
void endgrent(void);
```

Feature Test Macro Requirements for glibc (see **feature_test_macros(7)**):

```
setgrent():
    _XOPEN_SOURCE >= 500
    || /* glibc >= 2.19: */ _DEFAULT_SOURCE
    || /* glibc <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE

getgrent(), endgrent():
    Since glibc 2.22:
    _XOPEN_SOURCE >= 500 || _DEFAULT_SOURCE
    glibc 2.21 and earlier
    _XOPEN_SOURCE >= 500
    || /* Since glibc 2.12: */ _POSIX_C_SOURCE >= 200809L
    || /* glibc <= 2.19: */ _BSD_SOURCE || _SVID_SOURCE
```

DESCRIPTION

The **getgrent()** function returns a pointer to a structure containing the broken-out fields of a record in the group database (e.g., the local group file */etc/group*, NIS, and LDAP). The first time **getgrent()** is called, it returns the first entry; thereafter, it returns successive entries.

The **setgrent()** function rewinds to the beginning of the group database, to allow repeated scans.

The **endgrent()** function is used to close the group database after all processing has been performed.

The *group* structure is defined in *<grp.h>* as follows:

```
struct group {
    char    *gr_name;           /* group name */
    char    *gr_passwd;        /* group password */
    gid_t   gr_gid;            /* group ID */
    char    **gr_mem;           /* NULL-terminated array of pointers
                                to names of group members */
};
```

For more information about the fields of this structure, see **group(5)**.

RETURN VALUE

The **getgrent()** function returns a pointer to a *group* structure, or NULL if there are no more entries or an error occurs.

Upon error, *errno* may be set. If one wants to check *errno* after the call, it should be set to zero before the call.

The return value may point to a static area, and may be overwritten by subsequent calls to **getgrent()**, **getgrgid(3)**, or **getgrnam(3)**. (Do not pass the returned pointer to **free(3)**.)

ERRORS**EAGAIN**

The service was temporarily unavailable; try again later. For NSS backends in glibc this indicates a temporary error talking to the backend. The error may correct itself, retrying later is suggested.

EINTR

A signal was caught; see **signal(7)**.

EIO I/O error.

EMFILE

The per-process limit on the number of open file descriptors has been reached.

ENFILE

The system-wide limit on the total number of open files has been reached.

ENOENT

A necessary input file cannot be found. For NSS backends in glibc this indicates the backend is not correctly configured.

ENOMEM

Insufficient memory to allocate *group* structure.

ERANGE

Insufficient buffer space supplied.

FILES

/etc/group

local group database file

ATTRIBUTES

For an explanation of the terms used in this section, see **attributes(7)**.

| Interface | Attribute | Value |
|---------------------------------------|---------------|---|
| getgrent() | Thread safety | MT-Unsafe race:grent race:grentbuf locale |
| setgrent() , endgrent() | Thread safety | MT-Unsafe race:grent locale |

In the above table, *grent* in *race:grent* signifies that if any of the functions **setgrent()**, **getgrent()**, or **endgrent()** are used in parallel in different threads of a program, then data races could occur.

STANDARDS

POSIX.1-2001, POSIX.1-2008, SVr4, 4.3BSD.

SEE ALSO

fgetgrent(3), **getgrent_r(3)**, **getgrgid(3)**, **getgrnam(3)**, **getgrouplist(3)**, **putgrent(3)**, **group(5)**