

**NAME**

getgrent, setgrent, endgrent – get group file entry

**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 since 2.19: */ _DEFAULT_SOURCE || /* Glibc versions <=
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 versions <= 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
<b>getgrent()</b>	Thread safety	MT-Unsafe race:grent race:grentbuf locale
<b>setgrent()</b> , <b>endgrent()</b>	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.

**CONFORMING TO**

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\(5\)](#)

**COLOPHON**

This page is part of release 4.16 of the Linux *man-pages* project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at <https://www.kernel.org/doc/man-pages/>.