NAME

getgrnam, getgrnam_r, getgrgid, getgrgid_r - get group file entry

SYNOPSIS

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

struct group *getgrnam(const char ***name*);**

struct group *getgrgid(gid_t *gid***);**

int getgrnam_r(const char ***name*, struct group ***grp***,**
char ***buf*, size_t** *buflen***, struct group ****result***);**

int getgrgid_r(gid_t *gid***, struct group ***grp***,**
char ***buf*, size_t** *buflen***, struct group ****result***);**

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

getgrnam_r(), **getgrgid_r**():
_POSIX_C_SOURCE >= 1 || _XOPEN_SOURCE || _BSD_SOURCE || _SVID_SOURCE ||
_POSIX_SOURCE

DESCRIPTION

The **getgrnam**() function returns a pointer to a structure containing the broken-out fields of the record in the group database (e.g., the local group file */etc/group*, NIS, and LDAP) that matches the group name *name*.

The **getgrgid**() function returns a pointer to a structure containing the broken-out fields of the record in the group database that matches the group ID *gid*.

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).

The **getgrnam_r**() and **getgrgid_r**() functions obtain the same information as **getgrnam**() and **getgrgid**(), but store the retrieved *group* structure in the space pointed to by *grp*. The string fields pointed to by the members of the *group* structure are stored in the buffer *buf* of size *buflen*. A pointer to the result (in case of success) or NULL (in case no entry was found or an error occurred) is stored in **result*.

The call

sysconf(_SC_GETGR_R_SIZE_MAX)

returns either -1, without changing *errno*, or an initial suggested size for *buf*. (If this size is too small, the call fails with **ERANGE**, in which case the caller can retry with a larger buffer.)

RETURN VALUE

The **getgrnam**() and **getgrgid**() functions return a pointer to a *group* structure, or NULL if the matching entry is not found or an error occurs. If an error occurs, *errno* is set appropriately. 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(3), **getgrgid**(), or **getgrnam**(). (Do not pass the returned pointer to free(3).)

On success, **getgrnam_r**() and **getgrgid_r**() return zero, and set **result* to *grp*. If no matching group record was found, these functions return 0 and store NULL in **result*. In case of error, an error number is returned, and NULL is stored in **result*.

ERRORS

0 or **ENOENT** or **ESRCH** or **EBADF** or **EPERM** or ...
The given *name* or *gid* was not found.

EINTR
A signal was caught.

EIO I/O error.

EMFILE
The maximum number (**OPEN_MAX**) of files was open already in the calling process.

ENFILE
The maximum number of files was open already in the system.

ENOMEM
Insufficient memory to allocate *group* structure.

ERANGE
Insufficient buffer space supplied.

FILES

/etc/group
local group database file

ATTRIBUTES

Multithreading (see pthreads(7))

The **getgrnam**() and **getgrgid**() functions are not thread-safe.

The **getgrnam_r**() and **getgrgid_r**() functions are thread-safe.

CONFORMING TO

SVr4, 4.3BSD, POSIX.1-2001.

NOTES

The formulation given above under RETURN VALUE is from POSIX.1-2001. It does not call not found an error, hence does not specify what value *errno* might have in this situation. But that makes it impossible to recognize errors. One might argue that according to POSIX *errno* should be left unchanged if an entry is not found. Experiments on various UNIX-like systems shows that lots of different values occur in this situation: 0, ENOENT, EBADF, ESRCH, EWOULDBLOCK, EPERM, and probably others.

SEE ALSO

endgrent(3), fgetgrent(3), getgrent(3), getpwnam(3), setgrent(3), group(5)

COLOPHON

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