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Rocky Enterprise Linux 9.2 Manual Pages on command 'getgrnam.3'

\$ man getgrnam.3

GETGRNAM(3) Linux Programmer's Manual GETGRNAM(3)

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
    /* Glibc versions <= 2.19: */ _BSD_SOURCE || _SVID_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; 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.

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).

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?Interface ? Attribute ? Value ?

??

?getgrnam() ? Thread safety ? MT-Unsafe race:grnam locale ?

??

?getgrgid() ? Thread safety ? MT-Unsafe race:grgid locale ?

??

?getgrnam_r(), ? Thread safety ? MT-Safe locale ?

?getgrgid_r() ? ? ?

??

CONFORMING TO

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

NOTES

The formulation given above under "RETURN VALUE" is from POSIX.1. 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 show that lots of different values occur in this situation: 0, ENOENT, EBADF, ES?RCH, EWOULDBLOCK, EPERM, and probably others.

SEE ALSO

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

COLOPHON

This page is part of release 5.10 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/>.

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