



### ***Rocky Enterprise Linux 9.2 Manual Pages on command 'getgrgid\_r.3'***

**\$ man getgrgid\_r.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 `bufsize`. 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)`.

`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`, `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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GETGRNAM(3)