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

***\$ man fgetgrent\_r.3***

GETGRENT\_R(3)                      Linux Programmer's Manual                      GETGRENT\_R(3)

#### NAME

getgrent\_r, fgetgrent\_r - get group file entry reentrantly

#### SYNOPSIS

```
#include <grp.h>

int getgrent_r(struct group *gbuf, char *buf,
               size_t buflen, struct group **gbufp);

int fgetgrent_r(FILE *stream, struct group *gbuf, char *buf,
               size_t buflen, struct group **gbufp);
```

Feature Test Macro Requirements for glibc (see feature\_test\_macros(7)):

getgrent\_r(): \_GNU\_SOURCE

fgetgrent\_r():

Since glibc 2.19:

  \_DEFAULT\_SOURCE

Glibc 2.19 and earlier:

  \_SVID\_SOURCE

#### DESCRIPTION

The functions getgrent\_r() and fgetgrent\_r() are the reentrant versions of getgrent(3) and fgetgrent(3). The former reads the next group entry from the stream initialized by setgrent(3). The latter reads the next group entry from stream.

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 nonreentrant functions return a pointer to static storage, where this static storage contains further pointers to group name, password and members. The reentrant functions described here return all of that in caller-provided buffers. First of all there is the buffer `gbuf` that can hold a struct `group`. And next the buffer `buf` of size `buflen` that can hold additional strings. The result of these functions, the struct `group` read from the stream, is stored in the provided buffer `*gbuf`, and a pointer to this struct `group` is returned in `*gbuflp`.

#### RETURN VALUE

On success, these functions return 0 and `*gbuflp` is a pointer to the struct `group`. On error, these functions return an error value and `*gbuflp` is NULL.

#### ERRORS

- ENOENT No more entries.
- ERANGE Insufficient buffer space supplied. Try again with larger buffer.

#### ATTRIBUTES

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

Interface	Attribute	Value	
<code>?getgrent_r()</code>	Thread safety	MT-Unsafe	race:grent locale
<code>?fgetgrent_r()</code>	Thread safety	MT-Safe	

In the above table, `grent` in `race:grent` signifies that if any of the functions `setgrent(3)`, `getgrent(3)`, `endgrent(3)`, or `getgrent_r()` are used in parallel in different threads of a program, then data races could occur.

#### CONFORMING TO

These functions are GNU extensions, done in a style resembling the POSIX version of `func?`

tions like `getpwnam_r(3)`. Other systems use the prototype

```
struct group *getgrent_r(struct group *grp, char *buf,  
                        int buflen);
```

or, better,

```
int getgrent_r(struct group *grp, char *buf, int buflen,  
              FILE **gr_fp);
```

## NOTES

The function `getgrent_r()` is not really reentrant since it shares the reading position in the stream with all other threads.

## EXAMPLES

```
#define _GNU_SOURCE  
  
#include <grp.h>  
  
#include <stdio.h>  
  
#include <stdint.h>  
  
#include <stdlib.h>  
  
#define BUFLLEN 4096  
  
int  
main(void)  
{  
    struct group grp;  
    struct group *grpp;  
    char buf[BUFLLEN];  
    int i;  
    setgrent();  
    while (1) {  
        i = getgrent_r(&grp, buf, sizeof(buf), &grpp);  
        if (i)  
            break;  
        printf("%s (%jd):", grpp->gr_name, (intmax_t) grpp->gr_gid);  
        for (int j = 0; ; j++) {  
            if (grpp->gr_mem[j] == NULL)  
                break;  
            printf(" %s", grpp->gr_mem[j]);
```

```
    }  
    printf("\n");  
}  
endgrent();  
exit(EXIT_SUCCESS);  
}
```

#### SEE ALSO

fgetgrent(3), getgrent(3), getgrgid(3), getgrnam(3), putgrent(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/>.

GNU

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