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 **fp***, 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(): _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 the stream *fp*.

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 **gbufp*.

RETURN VALUE

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

ERRORS

ENOENT

No more entries.

ERANGE

Insufficient buffer space supplied. Try again with larger buffer.

CONFORMING TO

These functions are GNU extensions, done in a style resembling the POSIX version of functions like getpwnam_r(3). Other systems use 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.

EXAMPLE

```
#define _GNU_SOURCE
#include <grp.h>
#include <stdio.h>
#include <stdlib.h>
#define BUFLEN 4096

int
main(void)
{
struct group grp, *grpp;
char buf[BUFLEN];
int i;

setgrent();
while (1) {
i = getgrent_r(&grp, buf, BUFLEN, &grpp);
if (i)
break;
printf(%s (%d):, grpp->gr_name, grpp->gr_gid);
for (i = 0; ; i++) {
if (grpp->gr_mem[i] == NULL)
break;
printf( %s, grpp->gr_mem[i]);
}
printf(n);
}
endgrent();
exit(EXIT_SUCCESS);
}
```

SEE ALSO

fgetgrent(3), getgrent(3), getgrgid(3), getgrnam(3), putgrent(3), group(5)

COLOPHON

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