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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'getpwent_r.3' command

$ man getpwent_r.3

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

NAME

getpwent_r, fgetpwent_r - get passwd file entry reentrantly

SYNOPSIS

```
#include <pwd.h>

int getpwent_r(struct passwd *pwbuf, char *buf,
               size_t buflen, struct passwd **pwbufp);

int fgetpwent_r(FILE *stream, struct passwd *pwbuf, char *buf,
                size_t buflen, struct passwd **pwbufp);
```

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

getpwent_r(),

Since glibc 2.19:

_DEFAULT_SOURCE

Glibc 2.19 and earlier:

_BSD_SOURCE || _SVID_SOURCE

fgetpwent_r():

Since glibc 2.19:

_DEFAULT_SOURCE

Glibc 2.19 and earlier:

_SVID_SOURCE

DESCRIPTION

The functions getpwent_r() and fgetpwent_r() are the reentrant versions

of getpwent(3) and fgetpwent(3). The former reads the next passwd en?

try from the stream initialized by setpwent(3). The latter reads the next passwd entry from stream.

The passwd structure is defined in <pwd.h> as follows:

```
struct passwd {
    char    *pw_name;      /* username */
    char    *pw_passwd;    /* user password */
    uid_t    pw_uid;       /* user ID */
    gid_t    pw_gid;       /* group ID */
    char    *pw_gecos;     /* user information */
    char    *pw_dir;       /* home directory */
    char    *pw_shell;     /* shell program */
};
```

For more information about the fields of this structure, see passwd(5).

The nonreentrant functions return a pointer to static storage, where this static storage contains further pointers to user name, password, gecos field, home directory and shell. The reentrant functions described here return all of that in caller-provided buffers. First of all there is the buffer pwbuf that can hold a struct passwd. And next the buffer buf of size buflen that can hold additional strings. The result of these functions, the struct passwd read from the stream, is stored in the provided buffer *pwbuf, and a pointer to this struct passwd is returned in *pwbufp.

RETURN VALUE

On success, these functions return 0 and *pwbufp is a pointer to the struct passwd. On error, these functions return an error value and *pwbufp 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 ?

??

?getpwent_r() ? Thread safety ? MT-Unsafe race:pwent locale ?

??

?fgetpwent_r() ? Thread safety ? MT-Safe ?

??

In the above table, pwent in race:pwent signifies that if any of the functions setpwent(), getpwent(), endpwent(), or getpwent_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 functions like getpwnam_r(3). Other systems use the prototype

```
struct passwd *
getpwent_r(struct passwd *pwd, char *buf, int buflen);
```

or, better,

```
int
getpwent_r(struct passwd *pwd, char *buf, int buflen,
        FILE **pw_fp);
```

NOTES

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

EXAMPLES

```
#define _GNU_SOURCE
#include <pwd.h>
#include <stdio.h>
#include <stdint.h>
#define BUFLEN 4096
int
main(void)
{
```

```
        struct passwd pw;
        struct passwd *pwp;
        char buf[BUFLEN];
        int i;
        setpwent();
        while (1) {
            i = getpwent_r(&pw, buf, sizeof(buf), &pwp);
            if (i)
                break;
            printf("%s (%jd)\tHOME %s\tSHELL %s\n", pwp->pw_name,
                    (intmax_t) pwp->pw_uid, pwp->pw_dir, pwp->pw_shell);
        }
        endpwent();
        exit(EXIT_SUCCESS);
    }
```

SEE ALSO

fgetpwent(3), getpw(3), getpwent(3), getpwnam(3), getpwuid(3), putp? went(3), passwd(5)

COLOPHON

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