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Linux Ubuntu 26.04 Manual Pages on command 'getpwent_r.3'

\$ man getpwent_r.3

getpwent_r(3) Library Functions Manual getpwent_r(3)

NAME

getpwent_r, fgetpwent_r - get passwd file entry reentrantly

LIBRARY

Standard C library (libc, -lc)

SYNOPSIS

```
#include <pwd.h>
```

```
int getpwent_r(size_t size;
```

```
    struct passwd *restrict pwbuf,
```

```
    char buf[restrict size], size_t size,
```

```
    struct passwd **restrict pwbufp);
```

```
int fgetpwent_r(size_t size;
```

```
    FILE *restrict stream, struct passwd *restrict pwbuf,
```

```
    char buf[restrict size], size_t size,
```

```
    struct passwd **restrict 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` entry 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 `size` 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.

VERSIONS

Other systems use the prototype

```
struct passwd *
getpwent_r(struct passwd *pwd, char buf[.size], int size);
or, better,
int
getpwent_r(struct passwd *pwd, char buf[.size], int size,
FILE **pw_fp);
```

STANDARDS

None.

HISTORY

These functions are done in a style resembling the POSIX version of functions like getpwent_r(3).

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 <stdint.h>
#include <stdio.h>
#include <stdlib.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), putpwent(3), passwd(5)

Linux man-pages 6.17

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