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Rocky Enterprise Linux 9.2 Manual Pages on command 'getgrouplist.3'

\$ man getgrouplist.3

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

NAME

getgrouplist - get list of groups to which a user belongs

SYNOPSIS

```
#include <grp.h>
```

```
int getgrouplist(const char *user, gid_t group,  
                gid_t *groups, int *ngroups);
```

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

getgrouplist():

Since glibc 2.19:

```
_DEFAULT_SOURCE
```

Glibc 2.19 and earlier:

```
_BSD_SOURCE
```

DESCRIPTION

The `getgrouplist()` function scans the group database (see `group(5)`) to obtain the list of groups that user belongs to. Up to `*ngroups` of these groups are returned in the array `groups`.

If it was not among the groups defined for user in the group database,

then group is included in the list of groups returned by getgrouplist(); typically this argument is specified as the group ID from the password record for user.

The ngroups argument is a value-result argument: on return it always contains the number of groups found for user, including group; this value may be greater than the number of groups stored in groups.

RETURN VALUE

If the number of groups of which user is a member is less than or equal to *ngroups, then the value *ngroups is returned.

If the user is a member of more than *ngroups groups, then getgrouplist() returns -1. In this case, the value returned in *ngroups can be used to resize the buffer passed to a further call getgrouplist().

VERSIONS

This function is present since glibc 2.2.4.

ATTRIBUTES

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

??

?Interface ? Attribute ? Value ?

??

?getgrouplist() ? Thread safety ? MT-Safe locale ?

??

CONFORMING TO

This function is nonstandard; it appears on most BSDs.

BUGS

In glibc versions before 2.3.3, the implementation of this function contains a buffer-overflow bug: it returns the complete list of groups for user in the array groups, even when the number of groups exceeds *ngroups.

EXAMPLES

The program below displays the group list for the user named in its first command-line argument. The second command-line argument specifies the ngroups value to be supplied to getgrouplist(). The following

shell session shows examples of the use of this program:

```
$ ./a.out cecilia 0  
getgrouplist() returned -1; ngroups = 3  
$ ./a.out cecilia 3  
ngroups = 3  
16 (dialout)  
33 (video)  
100 (users)
```

Program source

```
#include <stdio.h>  
#include <stdlib.h>  
#include <grp.h>  
#include <pwd.h>  
  
int  
main(int argc, char *argv[])  
{  
    int ngroups;  
    struct passwd *pw;  
    struct group *gr;  
    if (argc != 3) {  
        fprintf(stderr, "Usage: %s <user> <ngroups>\n", argv[0]);  
        exit(EXIT_FAILURE);  
    }  
    ngroups = atoi(argv[2]);  
    gid_t *groups = malloc(sizeof(*groups) * ngroups);  
    if (groups == NULL) {  
        perror("malloc");  
        exit(EXIT_FAILURE);  
    }  
    /* Fetch passwd structure (contains first group ID for user) */  
    pw = getpwnam(argv[1]);  
    if (pw == NULL) {  
        perror("getpwnam");
```

```

    exit(EXIT_SUCCESS);
}
/* Retrieve group list */
if (getgrouplist(argv[1], pw->pw_gid, groups, &ngroups) == -1) {
    fprintf(stderr, "getgrouplist() returned -1; ngroups = %d\n",
            ngroups);
    exit(EXIT_FAILURE);
}
/* Display list of retrieved groups, along with group names */
fprintf(stderr, "ngroups = %d\n", ngroups);
for (int j = 0; j < ngroups; j++) {
    printf("%d", groups[j]);
    gr = getgrgid(groups[j]);
    if (gr != NULL)
        printf(" (%s)", gr->gr_name);
    printf("\n");
}
exit(EXIT_SUCCESS);
}

```

SEE ALSO

getgroups(2), setgroups(2), getgrent(3), group_member(3), group(5),
passwd(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/>.

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