

opendir(3) — Linux manual page

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OPENDIR(3)

Linux Programmer's Manual

OPENDIR(3)

NAME [top](#)

opendir, fdopendir - open a directory

SYNOPSIS [top](#)

```
#include <sys/types.h>
#include <dirent.h>
```

```
DIR *opendir(const char *name);
DIR *fdopendir(int fd);
```

Feature Test Macro Requirements for glibc (see [feature_test_macros\(7\)](#)):

```
fdopendir():
    Since glibc 2.10:
        _POSIX_C_SOURCE >= 200809L
    Before glibc 2.10:
        _GNU_SOURCE
```

DESCRIPTION [top](#)

The **opendir()** function opens a directory stream corresponding to the directory *name*, and returns a pointer to the directory stream. The stream is positioned at the first entry in the directory.

The **fdopendir()** function is like **opendir()**, but returns a directory stream for the directory referred to by the open file descriptor *fd*. After a successful call to **fdopendir()**, *fd* is used internally by the implementation, and should not otherwise be used by the application.

RETURN VALUE [top](#)

The **opendir()** and **fdopendir()** functions return a pointer to the directory stream. On error, NULL is returned, and *errno* is set

to indicate the error.

ERRORS

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- EACCES
- Permission denied.
- EBADF
- fd* is not a valid file descriptor opened for reading.
- EMFILE
- The per-process limit on the number of open file descriptors has been reached.
- ENFILE
- The system-wide limit on the total number of open files has been reached.
- ENOENT
- Directory does not exist, or *name* is an empty string.
- ENOMEM
- Insufficient memory to complete the operation.
- ENOTDIR
- name* is not a directory.

VERSIONS

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fdopendir() is available in glibc since version 2.4.

ATTRIBUTES

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

Interface	Attribute	Value
opendir() , fdopendir()	Thread safety	MT-Safe

CONFORMING TO

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opendir() is present on SVr4, 4.3BSD, and specified in POSIX.1-2001. **fdopendir()** is specified in POSIX.1-2008.

NOTES

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Filename entries can be read from a directory stream using [readdir\(3\)](#).

The underlying file descriptor of the directory stream can be obtained using [dirfd\(3\)](#).

The **opendir()** function sets the close-on-exec flag for the file descriptor underlying the *DIR* *. The **fdopendir()** function leaves

the setting of the close-on-exec flag unchanged for the file descriptor, *fd*. POSIX.1-200x leaves it unspecified whether a successful call to **fdopendir()** will set the close-on-exec flag for the file descriptor, *fd*.

SEE ALSO [top](#)

[open\(2\)](#), [closedir\(3\)](#), [dirfd\(3\)](#), [readdir\(3\)](#), [rewinddir\(3\)](#), [scandir\(3\)](#), [seekdir\(3\)](#), [telldir\(3\)](#)

COLOPHON [top](#)

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GNU

2021-03-22

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Pages that refer to this page: [close_range\(2\)](#), [execve\(2\)](#), [fanotify_mark\(2\)](#), [fork\(2\)](#), [open\(2\)](#), [closedir\(3\)](#), [dirfd\(3\)](#), [fts\(3\)](#), [getdirentries\(3\)](#), [glob\(3\)](#), [readdir\(3\)](#), [rewinddir\(3\)](#), [scandir\(3\)](#), [seekdir\(3\)](#), [telldir\(3\)](#)

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