

**NAME**

**dup3** - duplicate an existing file descriptor

**LIBRARY**

Standard C Library (libc, -lc)

**SYNOPSIS**

```
#include <fcntl.h>
#include <unistd.h>
```

*int*

```
dup3(int oldd, int newd, int flags);
```

**DESCRIPTION**

The **dup3()** function duplicates an existing object descriptor while allowing the value of the new descriptor to be specified.

The close-on-exec flag on the new file descriptor is determined by the O\_CLOEXEC bit in *flags*.

If *oldd* != *newd* and *flags* == 0, the behavior is identical to dup2(*oldd*, *newd*).

If *oldd* == *newd*, then **dup3()** fails, unlike dup2(2).

**RETURN VALUES**

The value -1 is returned if an error occurs. The external variable *errno* indicates the cause of the error.

**ERRORS**

The **dup3()** function fails if:

- |          |  |
|----------|--|
| [EBADF]  | The <i>oldd</i> argument is not a valid active descriptor or the <i>newd</i> argument is negative or exceeds the maximum allowable descriptor number |
| [EINVAL] | The <i>oldd</i> argument is equal to the <i>newd</i> argument.   |
| [EINVAL] | The <i>flags</i> argument has bits set other than O_CLOEXEC.   |

**SEE ALSO**

accept(2), close(2), dup2(2), fcntl(2), getdtablesize(2), open(2), pipe(2), socket(2), socketpair(2)

**STANDARDS**

The **dup3()** function does not conform to any standard.

## **HISTORY**

The **dup3()** function appeared in FreeBSD 10.0.