

NAME

inotify_add_watch – add a watch to an initialized inotify instance

LIBRARY

Standard C library (*libc*, *-lc*)

SYNOPSIS

```
#include <sys/inotify.h>
```

```
int inotify_add_watch(int fd, const char *pathname, uint32_t mask);
```

DESCRIPTION

inotify_add_watch() adds a new watch, or modifies an existing watch, for the file whose location is specified in *pathname*; the caller must have read permission for this file. The *fd* argument is a file descriptor referring to the inotify instance whose watch list is to be modified. The events to be monitored for *pathname* are specified in the *mask* bit-mask argument. See **inotify(7)** for a description of the bits that can be set in *mask*.

A successful call to **inotify_add_watch()** returns a unique watch descriptor for this inotify instance, for the filesystem object (inode) that corresponds to *pathname*. If the filesystem object was not previously being watched by this inotify instance, then the watch descriptor is newly allocated. If the filesystem object was already being watched (perhaps via a different link to the same object), then the descriptor for the existing watch is returned.

The watch descriptor is returned by later **read(2)**s from the inotify file descriptor. These reads fetch *inotify_event* structures (see **inotify(7)**) indicating filesystem events; the watch descriptor inside this structure identifies the object for which the event occurred.

RETURN VALUE

On success, **inotify_add_watch()** returns a watch descriptor (a nonnegative integer). On error, *-1* is returned and *errno* is set to indicate the error.

ERRORS**EACCES**

Read access to the given file is not permitted.

EBADF

The given file descriptor is not valid.

EEXIST

mask contains **IN_MASK_CREATE** and *pathname* refers to a file already being watched by the same *fd*.

EFAULT

pathname points outside of the process's accessible address space.

EINVAL

The given event mask contains no valid events; or *mask* contains both **IN_MASK_ADD** and **IN_MASK_CREATE**; or *fd* is not an inotify file descriptor.

ENAMETOOLONG

pathname is too long.

ENOENT

A directory component in *pathname* does not exist or is a dangling symbolic link.

ENOMEM

Insufficient kernel memory was available.

ENOSPC

The user limit on the total number of inotify watches was reached or the kernel failed to allocate a needed resource.

ENOTDIR

mask contains **IN_ONLYDIR** and *pathname* is not a directory.

VERSIONS

Inotify was merged into the 2.6.13 Linux kernel.

STANDARDS

This system call is Linux-specific.

EXAMPLES

See **inotify(7)**.

SEE ALSO

inotify_init(2), **inotify_rm_watch(2)**, **inotify(7)**