



Linux Ubuntu 26.04 Manual Pages on command 'inotify_add_watch.2'

\$ man inotify_add_watch.2

inotify_add_watch(2) System Calls Manual inotify_add_watch(2)

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 *path, uint32_t mask);
```

DESCRIPTION

inotify_add_watch() adds a new watch, or modifies an existing watch, for the file whose location is specified in path; the caller must have read permission for this file. The first argument is a file descriptor referring to the inotify instance whose watch list is to be modified. The events to be monitored for path 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 path. 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 path refers to a file already being watched by the same fd.

EFAULT path 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

path is too long.

ENOENT A directory component in path 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 path is not a directory.

STANDARDS

Linux.

HISTORY

Linux 2.6.13.

EXAMPLES

See `inotify(7)`.

SEE ALSO

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

Linux man-pages 6.17

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`inotify_add_watch(2)`