



## **Red Hat Enterprise Linux Release 9.2 Manual Pages on 'inotify\_add\_watch.2' command**

### **\$ man inotify\_add\_watch.2**

INOTIFY\_ADD\_WATCH(2) Linux Programmer's Manual INOTIFY\_ADD\_WATCH(2)

#### NAME

inotify\_add\_watch - add a watch to an initialized inotify instance

#### 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 ino?

otify(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 appropriately.

## 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.

## CONFORMING TO

This system call is Linux-specific.

## EXAMPLES

See `inotify(7)`.

## SEE ALSO

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

## 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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