



## ***Linux Ubuntu 26.04 Manual Pages on command 'sync.2'***

### ***\$ man sync.2***

sync(2)                      System Calls Manual                      sync(2)

#### NAME

sync, syncfs - commit filesystem caches to disk

#### LIBRARY

Standard C library (libc, -lc)

#### SYNOPSIS

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

```
void sync(void);
```

```
int syncfs(int fd);
```

Feature Test Macro Requirements for glibc (see feature\_test\_macros(7)):

sync():

```
_XOPEN_SOURCE >= 500
```

```
|| /* Since glibc 2.19: */ _DEFAULT_SOURCE
```

```
|| /* glibc <= 2.19: */ _BSD_SOURCE
```

syncfs():

```
_GNU_SOURCE
```

#### DESCRIPTION

sync() causes all pending modifications to filesystem metadata and cached file data to be written to the underlying filesystems.

syncfs() is like sync(), but synchronizes just the filesystem containing file referred to by the open file descriptor fd.

#### RETURN VALUE

syncfs() returns 0 on success; on error, it returns -1 and sets errno to indicate the error.

## ERRORS

`sync()` is always successful.

`syncfs()` can fail for at least the following reasons:

`EBADF` `fd` is not a valid file descriptor.

`EIO` An error occurred during synchronization. This error may relate to data written to any file on the filesystem, or on metadata related to the filesystem itself.

`ENOSPC` Disk space was exhausted while synchronizing.

`ENOSPC`

`EDQUOT` Data was written to a file on NFS or another filesystem which does not allocate space at the time of a `write(2)` system call, and some previous write failed due to insufficient storage space.

## VERSIONS

According to the standard specification (i.e., POSIX.1), `sync()` schedules the writes, but may return before the actual writing is done. However Linux waits for I/O completions, and thus `sync()` or `syncfs()` provide the same guarantees as `fsync()` called on every file in the system or filesystem respectively.

## STANDARDS

`sync()` POSIX.1-2024.

`syncfs()`

Linux.

## HISTORY

`sync()` POSIX.1-2001, SVr4, 4.3BSD.

`syncfs()`

Linux 2.6.39, glibc 2.14.

Since glibc 2.2.2, the Linux prototype for `sync()` is as listed above, following the various standards. In glibc 2.2.1 and earlier, it was `"int sync(void)"`, and `sync()` always returned 0.

In mainline kernel versions prior to Linux 5.8, `syncfs()` will fail only when passed a bad file descriptor (`EBADF`). Since Linux 5.8, `syncfs()` will also report an error if one or more inodes failed to be written back since the last `syncfs()` call.

## BUGS

Before Linux 1.3.20, Linux did not wait for I/O to complete before returning.

## SEE ALSO

sync(1), fdatasync(2), fsync(2)

Linux man-pages 6.17

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