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## ***Rocky Enterprise Linux 9.2 Manual Pages on command 'pread64.2'***

**\$ man pread64.2**

PREAD(2)

Linux Programmer's Manual

PREAD(2)

### NAME

pread, pwrite - read from or write to a file descriptor at a given offset

### SYNOPSIS

```
#include <unistd.h>

ssize_t pread(int fd, void *buf, size_t count, off_t offset);
ssize_t pwrite(int fd, const void *buf, size_t count, off_t offset);
```

Feature Test Macro Requirements for glibc (see `feature_test_macros(7)`):

```
pread(), pwrite():
_XOPEN_SOURCE >= 500
|| /* Since glibc 2.12: */ _POSIX_C_SOURCE >= 200809L
```

### DESCRIPTION

`pread()` reads up to `count` bytes from file descriptor `fd` at offset `offset` (from the start of the file) into the buffer starting at `buf`. The file offset is not changed.

`pwrite()` writes up to `count` bytes from the buffer starting at `buf` to the file descriptor `fd` at offset `offset`. The file offset is not changed.

The file referenced by `fd` must be capable of seeking.

### RETURN VALUE

On success, `pread()` returns the number of bytes read (a return of zero indicates end of file) and `pwrite()` returns the number of bytes written.

Note that it is not an error for a successful call to transfer fewer bytes than requested (see `read(2)` and `write(2)`).

On error, `-1` is returned and `errno` is set to indicate the cause of the error.

## ERRORS

`pread()` can fail and set `errno` to any error specified for `read(2)` or `lseek(2)`. `pwrite()` can fail and set `errno` to any error specified for `write(2)` or `lseek(2)`.

## VERSIONS

The `pread()` and `pwrite()` system calls were added to Linux in version 2.1.60; the entries in the i386 system call table were added in 2.1.69. C library support (including emulation using `lseek(2)` on older kernels without the system calls) was added in glibc 2.1.

## CONFORMING TO

POSIX.1-2001, POSIX.1-2008.

## NOTES

The `pread()` and `pwrite()` system calls are especially useful in multithreaded applications. They allow multiple threads to perform I/O on the same file descriptor without being affected by changes to the file offset by other threads.

### C library/kernel differences

On Linux, the underlying system calls were renamed in kernel 2.6: `pread()` became `pread64()`, and `pwrite()` became `pwrite64()`. The system call numbers remained the same. The glibc `pread()` and `pwrite()` wrapper functions transparently deal with the change. On some 32-bit architectures, the calling signature for these system calls differ, for the reasons described in `syscall(2)`.

## BUGS

POSIX requires that opening a file with the `O_APPEND` flag should have no effect on the location at which `pwrite()` writes data. However, on Linux, if a file is opened with `O_APPEND`, `pwrite()` appends data to the end of the file, regardless of the value of `offset`.

## SEE ALSO

`lseek(2)`, `read(2)`, `readv(2)`, `write(2)`

## COLOPHON

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