

**NAME**

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

**SYNOPSIS**

```
#define _XOPEN_SOURCE 500
```

```
#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);
```

**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, the number of bytes read or written is returned (zero indicates that nothing was written, in the case of **pwrite()**, or end of file, in the case of **pread()**, or `-1` on error, in which case *errno* is set to indicate 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.

**SEE ALSO**

**lseek(2)**, **read(2)**, **write(2)**, **feature\_test\_macros(7)**

**COLOPHON**

This page is part of release 3.22 of the Linux *man-pages* project. A description of the project, and information about reporting bugs, can be found at <http://www.kernel.org/doc/man-pages/>.