

NAME

posix_fadvise - give advice about use of file data

LIBRARY

Standard C Library (libc, -lc)

SYNOPSIS

#include <fcntl.h>

int

posix_fadvise(*int fd, off_t offset, off_t len, int advice*);

DESCRIPTION

The **posix_fadvise**() system call allows a process to describe to the system its data access behavior for an open file descriptor *fd*. The advice covers the data starting at offset *offset* and continuing for *len* bytes. If *len* is zero, all data from *offset* to the end of the file is covered.

The behavior is specified by the *advice* parameter and may be one of:

- | | |
|-----------------------|--|
| POSIX_FADV_NORMAL | Tells the system to revert to the default data access behavior. |
| POSIX_FADV_RANDOM | Is a hint that file data will be accessed randomly, and prefetching is likely not advantageous. |
| POSIX_FADV_SEQUENTIAL | Tells the system that file data will be accessed sequentially. This currently does nothing as the default behavior uses heuristics to detect sequential behavior. |
| POSIX_FADV_WILLNEED | Tells the system that the specified data will be accessed in the near future. The system may initiate an asynchronous read of the data if it is not already present in memory. |
| POSIX_FADV_DONTNEED | Tells the system that the specified data will not be accessed in the near future. The system may decrease the in-memory priority of clean data within the specified range and future access to this data may require a read operation. |
| POSIX_FADV_NOREUSE | Tells the system that the specified data will only be accessed once and then not reused. The system may decrease the in-memory priority of data once it has been read or written. Future access to this data may |

require a read operation.

RETURN VALUES

If successful, `posix_fadvise()` returns zero. It returns an error on failure, without setting *errno*.

ERRORS

Possible failure conditions:

- | | |
|--------------|---|
| [EBADF] | The <i>fd</i> argument is not a valid file descriptor. |
| [EINVAL] | The <i>advice</i> argument is not valid. |
| [EINVAL] | The <i>offset</i> or <i>len</i> arguments are negative, or <i>offset + len</i> is greater than the maximum file size. |
| [ENODEV] | The <i>fd</i> argument does not refer to a regular file. |
| [ESPIPE] | The <i>fd</i> argument is associated with a pipe or FIFO. |
| [EIO] | An I/O error occurred while reading from or writing to a file system. |
| [EINTEGRITY] | Corrupted data was detected while reading from the file system. |

SEE ALSO

`madvise(2)`

STANDARDS

The `posix_fadvise()` interface conforms to IEEE Std 1003.1-2001 ("POSIX.1").

HISTORY

The `posix_fadvise()` system call first appeared in FreeBSD 9.1.