Rocky Enterprise Linux 9.2 Manual Pages on command 'readahead.2'

$ man readahead.2

READAHEAD(2)   Linux Programmer's Manual   READAHEAD(2)

NAME

   readahead - initiate file readahead into page cache

SYNOPSIS

   #define _GNU_SOURCE   /* See feature_test_macros(7) */

   #include <fcntl.h>

   ssize_t readahead(int fd, off64_t offset, size_t count);

DESCRIPTION

   readahead() initiates readahead on a file so that subsequent reads from that file will be

   satisfied from the cache, and not block on disk I/O (assuming the readahead was initiated

   early enough and that other activity on the system did not in the meantime flush pages

   from the cache).

   The fd argument is a file descriptor identifying the file which is to be read. The offset

   argument specifies the starting point from which data is to be read and count specifies

   the number of bytes to be read. I/O is performed in whole pages, so that offset is effec?

   tively rounded down to a page boundary and bytes are read up to the next page boundary

   greater than or equal to (offset+count). readahead() does not read beyond the end of the

   file.   The file offset of the open file description referred to by the file descriptor fd

   is left unchanged.

RETURN VALUE

   On success, readahead() returns 0; on failure, -1 is returned, with errno set to indicate

   the cause of the error.

ERRORS

EBADF fd is not a valid file descriptor or is not open for reading.

EINVAL fd does not refer to a file type to which readahead() can be applied.

VERSIONS

The readahead() system call appeared in Linux 2.4.13; glibc support has been provided since version 2.3.

CONFORMING TO

The readahead() system call is Linux-specific, and its use should be avoided in portable applications.

NOTES

On some 32-bit architectures, the calling signature for this system call differs, for the reasons described in syscall(2).

BUGS

readahead() attempts to schedule the reads in the background and return immediately. How?ever, it may block while it reads the filesystem metadata needed to locate the requested blocks. This occurs frequently with ext[234] on large files using indirect blocks instead of extents, giving the appearance that the call blocks until the requested data has been read.

SEE ALSO

lseek(2), madvise(2), mmap(2), posix_fadvise(2), read(2)

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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