

NAME

cachestat – query the page cache statistics of a file

SYNOPSIS

```
#include <sys/mman.h>

int cachestat(unsigned int fd, struct cachestat_range *cstat_range,
              struct cachestat *cstat, unsigned int flags);

struct cachestat_range {
    __u64 off;
    __u64 len;
};

struct cachestat {
    __u64 nr_cache;
    __u64 nr_dirty;
    __u64 nr_writeback;
    __u64 nr_evicted;
    __u64 nr_recently_evicted;
};
```

DESCRIPTION

cachestat() queries the number of cached pages, dirty pages, pages marked for writeback, evicted pages, and recently evicted pages in the byte range specified by *.off* and *.len* in the **cachestat_range** structure.

An evicted page is one that was previously in the page cache but has since been evicted. A page is considered recently evicted if its reentry into the cache would indicate active usage under memory pressure.

The results are returned in a **cachestat** structure, pointed to by the *cstat* argument.

The *.off* and *.len* fields must be non-negative. If *.len* > 0, the queried range is [*.off*, *.off*+*.len*]. If *.len* == 0, the range is from *.off* to the end of the file.

The *flags* argument is reserved for future use and must be set to 0.

Currently, **hugetlbfs** files are not supported.

RETURN VALUE

On success, **cachestat()** returns 0. On error, -1 is returned, and *errno* is set to indicate the error.

ERRORS**EFAULT**

cstat or *cstat_range* point to an invalid address.

EINVAL

Invalid *flags* value.

EBADF

Invalid file descriptor.

EOPNOTSUPP

The file descriptor refers to a **hugetlbfs** file, which is unsupported.

STANDARDS

Linux.

HISTORY

Linux 6.5.

CAVEATS

Note that the status of a page may change after **cachestat()** retrieves it but before the values are returned to the application; thus, the values may be slightly outdated.