NAME

cacheflush − flush contents of instruction and/or data cache

SYNOPSIS

#include <asm/cachectl.h>

int cacheflush(char *_addr_**, int** _nbytes_**, int** _cache_**);**

DESCRIPTION

cacheflush() flushes the contents of the indicated cache(s) for the user addresses in the range _addr_ to _(addr+nbytes-1)_. _cache_ may be one of:

ICACHE
Flush the instruction cache.

DCACHE
Write back to memory and invalidate the affected valid cache lines.

BCACHE
Same as **(ICACHE|DCACHE)**.

RETURN VALUE

cacheflush() returns 0 on success or −1 on error. If errors are detected, _errno_ will indicate the error.

ERRORS

EFAULT
Some or all of the address range _addr_ to _(addr+nbytes-1)_ is not accessible.

EINVAL
cache is not one of **ICACHE**, **DCACHE**, or **BCACHE** (but see BUGS).

CONFORMING TO

Historically, this system call was available on all MIPS UNIX variants including RISC/os, IRIX, Ultrix, NetBSD, OpenBSD, and FreeBSD (and also on some non-UNIX MIPS operating systems), so that the existence of this call in MIPS operating systems is a de-facto standard.

Caveat

cacheflush() should not be used in programs intended to be portable. On Linux, this call first appeared on the MIPS architecture, but nowadays, Linux provides a **cacheflush**() system call on some other architectures, but with different arguments.

BUGS

Linux kernels older than version 2.6.11 ignore the _addr_ and _nbytes_ arguments, making this function fairly expensive. Therefore, the whole cache is always flushed.

This function always behaves as if **BCACHE** has been passed for the _cache_ argument and does not do any error checking on the _cache_ argument.

COLOPHON

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