

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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