NAME

pmc_attach, **pmc_detach** - attaching and detaching process scope PMCs to target processes

LIBRARY

Performance Counters Library (libpmc, -lpmc)

SYNOPSIS

#include <pmc.h>

int
pmc_attach(*pmc_id_t pmcid*, *pid_t pid*);

int
pmc_detach(*pmc_id_t pmcid*, *pid_t pid*);

DESCRIPTION

These functions control the set of target processes tracked by a process scope PMC.

Function **pmc_attach**() is used to attach a process scope PMC specified by argument *pmcid* to a target process specified by argument *pid*. Argument *pid* may be zero to denote the current process. If the PMC was allocated with modifier PMC_F_DESCENDANTS, the PMC will additionally attach to current and future descendents of the specified target process. The PMC should be in a quiescent state (i.e., not running).

Function **pmc_detach**() is used to detach a process scope PMC specified by argument *pmcid* from a process specified by argument *pid*. Argument *pid* may be zero to denote the current process.

RETURN VALUES

Upon successful completion, the value 0 is returned; otherwise the value -1 is returned and the global variable *errno* is set to indicate the error.

ERRORS

A call to function **pmc_attach**() may fail with the following errors:

[EBUSY]   Argument *pmcid* specified a PMC that was not in a quiescent state.

[EBUSY]   The target process specified by function *pmc_attach* is being tracked by another process scope PMC that uses the same PMC hardware resources.

[EEXIST]   The target process is already being tracked by the specified PMC.

[EINVAL]　　　　　　　　Argument *pmcid* specified a PMC with system scope.

[EINVAL]　　　　　　　　Argument *pid* specified an illegal process id.

[EINVAL]　　　　　　　　The current process does not own a PMC with the handle specified in argument *pmcid*.

[EPERM]　　　　　　　　The caller lacked the privilege needed to attach PMCs to the specified target process.

[EPERM]　　　　　　　　(i386 and amd64 architectures) The PMC specified by argument *pmcid* has been setup to allow the use of the RDPMC instruction for self measurement.

[ESRCH]　　　　　　　　The current process does not own any PMCs.

[ESRCH]　　　　　　　　The process specified by argument *pid* did not exist.

A call to function **pmc_detach**() may fail with the following errors:

[EINVAL]　　　　　　　　Argument *pmcid* specified a PMC with system scope.

[EINVAL]　　　　　　　　Argument *pid* specified an illegal process id.

[EINVAL]　　　　　　　　The current process does not own a PMC with the handle specified in argument *pmcid*.

[EINVAL]　　　　　　　　The specified PMC was not attached to the target process.

[ESRCH]　　　　　　　　The current process does not own any PMCs.

[ESRCH]　　　　　　　　The process specified by argument *pid* is not being monitored by hwpmc(4).

[ESRCH]　　　　　　　　The process specified by argument *pid* did not exist.

SEE ALSO
  pmc(3), pmc_start(3), pmc_stop(3), hwpmc(4)