NAME

unw_get_proc_info_by_ip -- get procedure info by IP

SYNOPSIS

#include <libunwind.h>

int unw_get_proc_info_by_ip(unw_addr_space_t as, unw_word_t ip, unw_proc_info_t *pip, void *arg);

DESCRIPTION

The unw_get_proc_info_by_ip() routine returns the same kind of auxiliary information about a procedure as unw_get_proc_info(), except that the info is looked up by instruction-pointer (IP) instead of a cursor. This is more flexible because it is possible to look up the info for an arbitrary procedure, even if it is not part of the current call chain. However, since it is more flexible, it also tends to run slower (and often much slower) than unw_get_proc_info().

The routine expects the following arguments: as is the address-space in which the instruction pointer should be looked up. For a look-up in the local address-space, unw_local_addr_space can be passed for this argument. Argument ip is the instruction-pointer for which the procedure info should be looked up and pip is a pointer to a structure of type unw_proc_info_t which is used to return the info. Lastly, arg is the address space argument that should be used when accessing the address space. It has the same purpose as the argument of the same name for unw_init_remote(). When accessing the local address space (first argument is unw_local_addr_space), NULL must be passed for this argument.

Note that for the purposes of libunwind, the code of a procedure is assumed to occupy a single, contiguous range of addresses. For this reason, it is always possible to describe the extent of a procedure with the start_ip and end_ip members. If a single function/routine is split into multiple, discontiguous pieces, libunwind will treat each piece as a separate procedure.

RETURN VALUE

On successful completion, unw_get_proc_info_by_ip() returns 0. Otherwise the negative value of one of the error-codes below is returned.

THREAD AND SIGNAL SAFETY

unw_get_proc_info_by_ip() is thread safe. If the local address space is passed in argument as, this routine is also safe to use from a signal handler.

ERRORS

UNW_EUNSPEC
An unspecified error occurred.

UNW_ENOINFO
     Libunwind was unable to locate unwind-info for the procedure.

UNW_EBADVERSION
     The unwind-info for the procedure has version or format that is not understood by libunwind.

In addition, unw_get_proc_info_by_ip() may return any error returned by the access_mem() callback
(see unw_create_addr_space(3libunwind)).

SEE ALSO
     libunwind(3libunwind), unw_create_addr_space(3libunwind), unw_get_proc_name(3libunwind),
     unw_get_proc_info(3libunwind), unw_init_remote(3libunwind)

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