NAME

dladdr – translate address to symbolic information

SYNOPSIS

cc [*flag* ...] *file* ... **–ldl** [*library* ...]

#include <dlfcn.h>

int dladdr(void * *address*, **Dl_info** * *dlip***);**

MT-LEVEL

MT-Safe

DESCRIPTION

dladdr( ) is one of a family of routines that give the user direct access to the dynamic linking facilities. (SEE *Linker and Libraries Guide*). These routines are made available via the library loaded when the option **-ldl** is passed to the link-editor.

These routines are available to dynamically linked processes ONLY.

dladdr( ) determines if the specified *address* is located within one of the mapped objects that make up the current applications address space. An address is deemed to fall within a mapped object when it is between the base address, and the *_end* address of that object. If a mapped object fits this criteria, the symbol table made available to the run-time linker is searched to locate the nearest symbol to the specified address. The nearest symbol is one that has a value less than or equal to the required address.

The **Dl_info** structure must be preallocated by the user. The structure members are filled in by **dladdr( )** based on the specified *address*. The **Dl_info** structure includes the following members:

```
const char *    dli_fname;
void *          dli_fbase;
const char *    dli_sname;
void *          dli_saddr;
```

Descriptions of these members appear below.

dli_fname Contains a pointer to the filename of the containing object.

dli_fbase Contains the base address of the containing object.

dli_sname Contains a pointer to the nearest symbol name to the specified address. This symbol either has the same address, or is the nearest symbol with a lower address.

dli_saddr Contains the actual address of the above symbol.

RETURN VALUES

If the specified *address* cannot be matched to a mapped object, a 0 is returned. Otherwise a non-zero return is made and the associated **Dl_info** elements are filled.

SEE ALSO

ld(1), **dlclose**(3X), **dlerror**(3X), **dlopen**(3X), **dlsym**(3X)
Linker and Libraries Guide

NOTES

The **Dl_info** pointer elements point to addresses within the mapped objects, these may become invalid if objects are removed prior to these elements being used (see **dlclose( )**).

If no symbol is found to describe the specified address, both the **dli_sname** and **dli_saddr** members are set to 0.