

NAME

dwarf_get_aranges - retrieve program address space mappings

LIBRARY

DWARF Access Library (libdwarf, -ldwarf)

SYNOPSIS

```
#include <libdwarf.h>
```

```
int
dwarf_get_aranges(Dwarf_Debug dbg, Dwarf_Arange **ar_list, Dwarf_Signed *ar_cnt,
Dwarf_Error *err);
```

DESCRIPTION

The function **dwarf_get_aranges()** retrieves address range information from the ".debug_aranges" DWARF section. Information about address ranges is returned using opaque descriptors of type *Dwarf_Arange*,

Argument *dbg* should reference a DWARF debug context allocated using *dwarf_init*(3).

Argument *ar_list* should point to a location which will be set to a pointer to an array of *Dwarf_Arange* descriptors.

Argument *ar_cnt* should point to a location which will be set to the number of descriptors returned.

If argument *err* is not NULL, it will be used to store error information in case of an error.

Memory Management

The memory area used for the array returned in argument *ar_list* is owned by DWARF Access Library (libdwarf, -ldwarf). Application code should not attempt to directly free this area. Portable applications should instead use *dwarf_dealloc*(3) to indicate that the memory area may be freed.

RETURN VALUES

Function **dwarf_get_aranges()** returns DW_DLV_OK when it succeeds. It returns DW_DLV_NO_ENTRY if there is no ".debug_aranges" section associated with the specified debugging context. In case of an error, it returns DW_DLV_ERROR and sets the argument *err*.

EXAMPLES

To loop through all the address lookup table entries, use:

```
Dwarf_Debug dbg;
Dwarf_Addr start;
Dwarf_Arange *aranges;
Dwarf_Off die_off;
Dwarf_Signed i, cnt;
Dwarf_Unsigned length;
Dwarf_Error de;

if (dwarf_get_aranges(dbg, &aranges, &cnt, &de) != DW_DLV_OK)
    errx(EXIT_FAILURE, "dwarf_get_aranges: %s",
        dwarf_errmsg(de));

for (i = 0; i < cnt; i++) {
    if (dwarf_get_arange_info(aranges[i], &start, &length,
        &die_off, &de) != DW_DLV_OK) {
        warnx("dwarf_get_arange_info: %s",
            dwarf_errmsg(de));
        continue;
    }
    /* Do something with the returned information. */
}
```

ERRORS

Function **dwarf_get_aranges()** can fail with:

[DW_DLE_ARGUMENT] One of the arguments *dbg*, *ar_list* or *ar_cnt* was NULL.

[DW_DLE_NO_ENTRY] The debugging context *dbg* did not contain a ".debug_aranges" string section.

SEE ALSO

[dwarf\(3\)](#), [dwarf_get_arange\(3\)](#), [dwarf_get_arange_cu_header_offset\(3\)](#), [dwarf_get_arange_info\(3\)](#), [dwarf_get_cu_die_offset\(3\)](#)