

NAME

dwarf_get_globals, **dwarf_global_cu_offset**, **dwarf_global_die_offset**, **dwarf_global_name_offsets**, **dwarf_globname** - retrieve information about global objects

LIBRARY

DWARF Access Library (libdwarf, -ldwarf)

SYNOPSIS

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

int

```
dwarf_get_globals(Dwarf_Debug dbg, Dwarf_Global **globals, Dwarf_Signed *nglobals,  
    Dwarf_Error *err);
```

int

```
dwarf_global_cu_offset(Dwarf_Global global, Dwarf_Off *cu_offset, Dwarf_Error *err);
```

int

```
dwarf_global_die_offset(Dwarf_Global global, Dwarf_Off *die_offset, Dwarf_Error *err);
```

int

```
dwarf_global_name_offsets(Dwarf_Global global, char **name, Dwarf_Off *die_offset,  
    Dwarf_Off *cu_die_offset, Dwarf_Error *err);
```

int

```
dwarf_globname(Dwarf_Global global, char **name, Dwarf_Error *err);
```

DESCRIPTION

These functions retrieve information about global symbols from the lookup tables in the ".debug_pubnames" DWARF section. Information about these global symbols is returned using opaque descriptors of type *Dwarf_Global*. Applications need to use the functions described below to retrieve the name and the offsets for these descriptors.

Function **dwarf_get_globals()** retrieves descriptors for all the global symbols associated with the DWARF debug context specified by argument *dbg*. The argument *globals* should point to a location that will be set to a pointer to an array of *Dwarf_Global* descriptors. The argument *nglobals* should point to a location that will be set to the number of descriptors returned.

Function **dwarf_global_cu_offset()** returns the section-relative offset, relative to the ".debug_info" section, of the compilation unit that contains the debugging information entry associated with the

argument *global*. Argument *cu_offset* should point to a location that will hold the returned offset.

Function **dwarf_global_die_offset()** retrieves the section-relative offset, relative to the ".debug_info" section, of the debugging information entry associated with the argument *global*, and stores it into the location pointed to by the argument *die_offset*.

Function **dwarf_global_name_offsets()** retrieves the name and the offsets for the debugging information entry for argument *global*. Argument *name* should point to a location which will be set to a pointer to a NUL-terminated string containing the name of the associated debugging information entry. Argument *die_offset* should point to a location which will be set to a section-relative offset, relative to the ".debug_info" section, of the associated debugging information entry. Argument *cu_die_offset* should point to a location which will be set to a section-relative offset, relative to the ".debug_info" section, of the first debugging information entry in the compilation unit associated with argument *global*.

Function **dwarf_globname()** sets the location pointed to by argument *name* to a pointer to a NUL-terminated string holding the name of the debugging information entry associated with the argument *global*.

Memory Management

The memory area used for the array of *Dwarf_Global* descriptors returned in argument *globals* by function **dwarf_get_globals()** is owned by the DWARF Access Library (libdwarf, -ldwarf). Application code should not attempt to directly free this pointer. Portable code should instead use the function **dwarf_globals_dealloc(3)** to indicate that the memory area may be freed.

The memory area used for the string returned in the *name* argument to functions **dwarf_globname()** and **dwarf_global_name_offsets()** is owned by the DWARF Access Library (libdwarf, -ldwarf). Portable code should use the **dwarf_dealloc(3)** function to indicate that the memory area may be freed.

Error Returns

If argument *err* is not NULL, these functions will use it to store error information, in case of an error.

RETURN VALUES

On success, these functions returns DW_DLV_OK. In case of an error, they return DW_DLV_ERROR and set the argument *err*.

ERRORS

These functions may fail with the following errors:

[DW_DLE_ARGUMENT] One of the arguments *cu_die_offset*, *cu_offset*, *dbg*, *die_offset*, *global*, *globals*, *name*, or *nglobals* was NULL.

SEE ALSO

dwarf(3), dwarf_dealloc(3), dwarf_get_cu_die_offset_given_cu_header_offset(3),
dwarf_globals_dealloc(3)