

**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 return 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)