

NAME

dwarf_new_die - allocate a new debugging information entry

LIBRARY

DWARF Access Library (libdwarf, -ldwarf)

SYNOPSIS

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

Dwarf_P_Die

```
dwarf_new_die(Dwarf_P_Debug dbg, Dwarf_Tag tag, Dwarf_P_Die parent, Dwarf_P_Die child,  
             Dwarf_P_Die left, Dwarf_P_Die right, Dwarf_Error *err);
```

DESCRIPTION

Function **dwarf_new_die**() allocates a new DWARF debugging information entry and links it to another debugging information entry.

Argument *dbg* should reference a DWARF producer instance allocated using `dwarf_producer_init(3)` or `dwarf_producer_init_b(3)`.

Argument *tag* should specify the tag of the newly created debugging information entry. Valid values for this argument are those for the `DW_TAG_*` symbols defined in `<libdwarf.h>`.

Argument *parent* specifies the parent link of the debugging information entry.

Argument *child* specifies the first child link of the debugging information entry.

Argument *left* specifies the left sibling link of the debugging information entry.

Argument *right* specifies the right sibling link of the debugging information entry.

Only one of arguments *parent*, *child*, *left* and *right* is allowed to be non-NULL. Application code can subsequently call the function `dwarf_die_link(3)` to change the links for the created debugging information entry.

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

RETURN VALUES

On success, function **dwarf_new_die**() returns the newly created debugging information entry. In case of an error, function **dwarf_new_die**() returns `DW_DLV_BADADDR` and sets the argument *err*.

EXAMPLES

To create debugging information entries and add them to the producer instance, use:

```
Dwarf_P_Debug dbg;
Dwarf_P_Die die1, die2;
Dwarf_Error de;

/* ... assume dbg refers to a DWARF producer instance ... */

die1 = dwarf_new_die(dbg, DW_TAG_compilation_unit, NULL, NULL, NULL,
    NULL, &de);
if (die1 == NULL) {
    warnx("dwarf_new_die failed: %s", dwarf_errmsg(-1));
    return;
}

die2 = dwarf_new_die(dbg, DW_TAG_base_type, die1, NULL, NULL,
    NULL, &de);
if (die1 == NULL) {
    warnx("dwarf_new_die failed: %s", dwarf_errmsg(-1));
    return;
}

if (dwarf_add_die_to_debug(dbg, die1, &de) != DW_DLX_OK) {
    warnx("dwarf_add_die_to_debug failed: %s", dwarf_errmsg(-1));
    return;
}
```

ERRORS

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

- [DW_DLE_ARGUMENT] Argument *dbg* was NULL.
- [DW_DLE_ARGUMENT] More than one of the arguments *parent*, *child*, *left* and *right* were non-NULL.
- [DW_DLE_MEMORY] An out of memory condition was encountered during the execution of the function.

SEE ALSO

dwarf(3), dwarf_add_die_to_debug(3), dwarf_die_link(3), dwarf_producer_init(3),
dwarf_producer_init_b(3)