

NAME

dwarf_get_fde_info_for_cfa_regs3 - retrieve a CFA register rule

LIBRARY

DWARF Access Library (libdwarf, -ldwarf)

SYNOPSIS

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

int

```
dwarf_get_fde_info_for_cfa_regs3(Dwarf_Fde fde, Dwarf_Addr pc, Dwarf_Small *type,
    Dwarf_Signed *offset_relevant, Dwarf_Signed *register_num, Dwarf_Signed *offset_or_block_len,
    Dwarf_Ptr *block_ptr, Dwarf_Addr *row_pc, Dwarf_Error *err);
```

DESCRIPTION

Function **dwarf_get_fde_info_for_cfa_reg3()** retrieves the CFA register rule for a given program counter address from the register rule table associated with an FDE descriptor.

Argument *fde* should reference a valid DWARF FDE descriptor.

Argument *pc* should hold the program counter address to be used to locate the desired register rule row.

On successful execution, **dwarf_get_fde_info_for_cfa_reg3()** stores information about the CFA register rule found into the locations pointed to by the arguments *type*, *offset_relevant*, *register_num*, *offset_or_block_len*, *block_ptr* and *row_pc*.

Argument *type* should point to a location which will hold the type code of the register rule found. The returned value is one of the DW_EXPR_* constants defined in the header file <libdwarf.h>.

If there is an offset value associated with the CFA register rule, the location pointed to by argument *offset_relevant* will be set to 1.

Argument *register_num* should point to a location which will hold the register number associated with the CFA register rule.

If the CFA register rule is of type DW_EXPR_OFFSET or DW_EXPR_VAL_OFFSET, the location pointed to by argument *offset_or_block_len* will be set to the offset value associated with the register rule, or to 0 if the register rule does not have an offset value. If the type code is DW_EXPR_EXPRESSION or DW_EXPR_VAL_EXPRESSION, the location pointed to by argument *offset_or_block_len* will be set to the length in bytes of the DWARF expression block associated with

the register rule.

Argument *block_ptr* should point to a location which will be set to a pointer to the content of the DWARF expression block associated with the CFA register rule.

Argument *row_pc* should point to a location which will be set to the lowest program counter address associated with the register rule found.

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

RETURN VALUES

Function **dwarf_get_fde_info_for_cfa_reg3()** returns DW_DLV_OK when it succeeds. In case of an error, it returns DW_DLV_ERROR and sets the argument *err*.

ERRORS

Function **dwarf_get_fde_info_for_cfa_reg3()** can fail with:

[DW_DLE_ARGUMENT] One of the arguments *block_ptr*, *fde*, *offset_or_block_len*, *offset_relevant*, *register_num*, *row_pc*, or *type* was NULL.

[DW_DLE_PC_NOT_IN_FDE_RANGE] The program counter value provided in argument *pc* did not fall in the range covered by argument *fde*.

SEE ALSO

dwarf(3), dwarf_get_fde_at_pc(3), dwarf_get_fde_info_for_all_regs(3),
dwarf_get_fde_info_for_all_regs3(3), dwarf_get_fde_info_for_reg(3), dwarf_get_fde_info_for_reg3(3),
dwarf_get_fde_n(3), dwarf_set_frame_cfa_value(3), dwarf_set_frame_rule_initial_value(3),
dwarf_set_frame_rule_table_size(3), dwarf_set_frame_same_value(3),
dwarf_set_frame_undefined_value(3)