

NAME

eu-readelf – Displays information about ELF files.

SYNOPSIS

```
eu-readelf [-a|--all]
            [-h|--file-header]
            [-l|--program-headers|--segments]
            [-S|--section-headers|--sections]
            [-g|--section-groups]
            [-e|--exception]
            [--syms|-s|--symbols [section name] ]
            [--dyn-syms]
            [-n|--notes [section name] ]
            [-r|--relocs]
            [-d|--dynamic]
            [-V|--version-info]
            [-A|--arch-specific]
            [-x <number or name>|--hex-dump=<number or name>]
            [-p <number or name>|--string-dump=<number or name>]
            [-z|--decompress]
            [-c|--archive-index]
            [--dwarf-skeleton <file> ]
            [--elf-section [section] ]
            [-w|
            --debug-dump[=line,=decodedline,=info,=info+,=abbrev,=pubnames,=aranges,=macro,=frames,=str,=loc,=ranges,=g]
            [-I|--histogram]
            [-v|--version]
            [-W|--wide]
            [-H|--help]
            elffile...
```

DESCRIPTION

eu-readelf displays information about one or more ELF format object files. The options control what particular information to display.

elffile... are the object files to be examined. 32-bit and 64-bit ELF files are supported, as are archives containing ELF files.

This program performs a similar function to **objdump** but it goes into more detail and it exists independently of the BFD library, so if there is a bug in BFD then readelf will not be affected.

OPTIONS

The long and short forms of options, shown here as alternatives, are equivalent. At least one option in addition to **-v** or **-H** must be given.

ELF Input Selection

--dwarf-skeleton <file>

Used with **-w** to find the skeleton Compile Units in FILE associated with the Split Compile units in a .dwo input file.

--elf-section [section]

Use the named SECTION (default .gnu_debugdata) as (compressed) ELF input data

ELF Output Selection

-a

--all

Equivalent to specifying **--file-header**, **--program-headers**, **--sections**, **--symbols**, **--relocs**, **--dynamic**, **--notes**, **--version-info**, **--arch-specific**, **--section-groups** and **--histogram**.

- h**
- file-header**
Displays the information contained in the ELF header at the start of the file.
- l**
- program-headers**
- segments**
Displays the information contained in the file's segment headers, if it has any.
- S**
- sections**
- section-headers**
Displays the information contained in the file's section headers, if it has any.
- g**
- section-groups**
Displays the information contained in the file's section groups, if it has any.
- I**
- histogram**
Display a histogram of bucket list lengths when displaying the contents of the symbol tables.
- s**
- syms**
- symbols [section name]**
Displays the entries in symbol table section of the file, if it has one. If a symbol has version information associated with it then this is displayed as well. The version string is displayed as a suffix to the symbol name, preceded by an @ character. For example **foo@VER_1**. If the version is the default version to be used when resolving unversioned references to the symbol then it is displayed as a suffix preceded by two @ characters. For example **foo@@VER_2**.
- dyn-syms**
Display (only) the dynamic symbol table.
- e**
- exception**
Display sections for exception handling.
- n**
- notes [section name]**
Displays the contents of the NOTE segments and/or sections, if any.
- r**
- relocs**
Displays the contents of the file's relocation section, if it has one.
- d**
- dynamic**
Displays the contents of the file's dynamic section, if it has one.
- V**
- version-info**
Displays the contents of the version sections in the file, if they exist.
- A**
- arch-specific**
Displays architecture-specific information in the file, if there is any.

Additional output selection

- x <name>**

--hex-dump=<name>

Displays the contents of the indicated section name as a hexadecimal bytes.

-w**--debug-dump[=decodedline,=info,=info+,=abbrev,=pubnames,=aranges,=macro,=frames,=str,=loc,=ranges,=gdb_index]**

Displays the contents of the DWARF debug sections in the file, if any are present. Compressed debug sections are automatically decompressed (temporarily) before they are displayed. If one or more of the optional letters or words follows the switch then only those type(s) of data will be dumped. The letters and words refer to the following information:

=abbrev

Displays the contents of the **.debug_abbrev** section.

=addr

Displays the contents of the **.debug_addr** section.

=frames

Display the raw contents of a **.debug_frame** section.

=gdb_index

Displays the contents of the **.gdb_index** and/or **.debug_names** sections.

=info

Displays the contents of the **.debug_info** section.

=info+

Displays the contents of the **.debug_info** section, plus any skeleton unit will be immediately followed by the corresponding split compile unit (from the **.dwo** file). To show the difference between "regular" CUs and split CUs print offsets and references between { and } instead of [and].

=decodedline

Displays the interpreted contents of the **.debug_line** section.

=macro

Displays the contents of the **.debug_macro** and/or **.debug_macinfo** sections.

=loc

Displays the contents of the **.debug_loc** and/or **.debug_loclists** sections.

=pubnames

Displays the contents of the **.debug_pubnames** and/or **.debug_gnu_pubnames** sections.

=aranges

Displays the contents of the **.debug_aranges** section.

=ranges

Displays the contents of the **.debug_ranges** and/or **.debug_rnglists** sections.

=str

Displays the contents of the **.debug_str**, **.debug_line_str** and/or **.debug_str_offsets** sections.

Note: displaying the contents of **.debug_static_funcs**, **.debug_static_vars** and **debug_weaknames** sections is not currently supported.

-p <number or name>**--string-dump=<number or name>**

Displays the contents of the indicated section as printable strings. A number identifies a particular section by index in the section table; any other string identifies all sections with that name in the object file.

-c**--archive-index**

Displays the file symbol index information contained in the header part of binary archives. Performs the same function as the **t** command to **ar**, but without using the BFD library.

Output control**-z****--decompress**

Requests that the section(s) being dumped by **x**, **R** or **p** options are decompressed before being displayed. If the section(s) are not compressed then they are displayed as is.

-v

--version

Display the version number of eu-readelf.

-W

--wide

Ignored for compatibility (lines always wide).

-H

--help

Display the command line options understood by **eu-readelf**.

@file

Read command-line options from *file*. The options read are inserted in place of the original *@file* option. If *file* does not exist, or cannot be read, then the option will be treated literally, and not removed.

Options in *file* are separated by whitespace. A whitespace character may be included in an option by surrounding the entire option in either single or double quotes. Any character (including a backslash) may be included by prefixing the character to be included with a backslash. The *file* may itself contain additional *@file* options; any such options will be processed recursively.

SEE ALSO

objdump(1), *readelf*(1) and the Info entries for *binutils*.

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