



Red Hat Enterprise Linux Release 9.2 Manual Pages on 'strip.1' command

\$ man strip.1

STRIP(1) GNU Development Tools STRIP(1)

NAME

strip - discard symbols and other data from object files

SYNOPSIS

```
strip [-F bfdname [--target=bfdname]
      [-I bfdname [--input-target=bfdname]
      [-O bfdname [--output-target=bfdname]
      [-s|--strip-all]
      [-S|-g|-d|--strip-debug]
      [--strip-dwo]
      [-K symbolname|--keep-symbol=symbolname]
      [-M|--merge-notes][--no-merge-notes]
      [-N symbolname |--strip-symbol=symbolname]
      [-w|--wildcard]
      [-x|--discard-all] [-X |--discard-locals]
      [-R sectionname |--remove-section=sectionname]
      [--keep-section=sectionpattern]
      [--remove-relocations=sectionpattern]
      [-o file] [-p|--preserve-dates]
      [-D|--enable-deterministic-archives]
      [-U|--disable-deterministic-archives]
      [--keep-file-symbols]
      [--only-keep-debug]
```

[-v|--verbose] [-V|--version]

[--help] [--info]

objfile...

DESCRIPTION

GNU strip discards all symbols from object files objfile. The list of object files may include archives. At least one object file must be given.

strip modifies the files named in its argument, rather than writing modified copies under different names.

OPTIONS

-F bfdname

--target=bfdname

Treat the original objfile as a file with the object code format bfdname, and rewrite it in the same format.

--help

Show a summary of the options to strip and exit.

--info

Display a list showing all architectures and object formats available.

-l bfdname

--input-target=bfdname

Treat the original objfile as a file with the object code format bfdname.

-O bfdname

--output-target=bfdname

Replace objfile with a file in the output format bfdname.

-R sectionname

--remove-section=sectionname

Remove any section named sectionname from the output file, in addition to whatever sections would otherwise be removed. This option may be given more than once. Note that using this option inappropriately may make the output file unusable. The wildcard character * may be given at the end of sectionname. If so, then

any section starting with sectionname will be removed.

If the first character of sectionpattern is the exclamation point

(!) then matching sections will not be removed even if an earlier

use of --remove-section on the same command line would otherwise

remove it. For example:

```
--remove-section=.text.* --remove-section=!text.foo
```

will remove all sections matching the pattern '.text.*', but will

not remove the section 'text.foo'.

--keep-section=sectionpattern

When removing sections from the output file, keep sections that

match sectionpattern.

--remove-relocations=sectionpattern

Remove relocations from the output file for any section matching

sectionpattern. This option may be given more than once. Note

that using this option inappropriately may make the output file

unusable. Wildcard characters are accepted in sectionpattern. For

example:

```
--remove-relocations=.text.*
```

will remove the relocations for all sections matching the pattern

'text.*'.

If the first character of sectionpattern is the exclamation point

(!) then matching sections will not have their relocation removed

even if an earlier use of --remove-relocations on the same command

line would otherwise cause the relocations to be removed. For

example:

```
--remove-relocations=.text.* --remove-relocations=!text.foo
```

will remove all relocations for sections matching the pattern

'text.*', but will not remove relocations for the section

'text.foo'.

-s

--strip-all

Remove all symbols.

-g

-S

-d

--strip-debug

Remove debugging symbols only.

--strip-dwo

Remove the contents of all DWARF .dwo sections, leaving the remaining debugging sections and all symbols intact. See the description of this option in the objcopy section for more information.

--strip-unnneeded

Remove all symbols that are not needed for relocation processing.

-K symbolname

--keep-symbol=symbolname

When stripping symbols, keep symbol symbolname even if it would normally be stripped. This option may be given more than once.

-M

--merge-notes

--no-merge-notes

For ELF files, attempt (or do not attempt) to reduce the size of any SHT_NOTE type sections by removing duplicate notes. The default is to attempt this reduction unless stripping debug or DWO information.

-N symbolname

--strip-symbol=symbolname

Remove symbol symbolname from the source file. This option may be given more than once, and may be combined with strip options other than -K.

-o file

Put the stripped output in file, rather than replacing the existing file. When this argument is used, only one objfile argument may be specified.

-p

--preserve-dates

Preserve the access and modification dates of the file.

-D

--enable-deterministic-archives

Operate in deterministic mode. When copying archive members and writing the archive index, use zero for UIDs, GIDs, timestamps, and use consistent file modes for all files.

If binutils was configured with --enable-deterministic-archives, then this mode is on by default. It can be disabled with the -U option, below.

-U

--disable-deterministic-archives

Do not operate in deterministic mode. This is the inverse of the -D option, above: when copying archive members and writing the archive index, use their actual UID, GID, timestamp, and file mode values.

This is the default unless binutils was configured with --enable-deterministic-archives.

-w

--wildcard

Permit regular expressions in symbolnames used in other command line options. The question mark (?), asterisk (*), backslash (\) and square brackets ([]) operators can be used anywhere in the symbol name. If the first character of the symbol name is the exclamation point (!) then the sense of the switch is reversed for that symbol. For example:

```
-w -K !foo -K fo*
```

would cause strip to only keep symbols that start with the letters "fo", but to discard the symbol "foo".

-x

--discard-all

Remove non-global symbols.

-X

--discard-locals

Remove compiler-generated local symbols. (These usually start with L or ..)

--keep-file-symbols

When stripping a file, perhaps with --strip-debug or

--strip-unneeded, retain any symbols specifying source file names, which would otherwise get stripped.

--only-keep-debug

Strip a file, emptying the contents of any sections that would not be stripped by --strip-debug and leaving the debugging sections intact. In ELF files, this preserves all the note sections in the output as well.

Note - the section headers of the stripped sections are preserved, including their sizes, but the contents of the section are discarded. The section headers are preserved so that other tools can match up the debuginfo file with the real executable, even if that executable has been relocated to a different address space.

The intention is that this option will be used in conjunction with --add-gnu-debuglink to create a two part executable. One a stripped binary which will occupy less space in RAM and in a distribution and the second a debugging information file which is only needed if debugging abilities are required. The suggested procedure to create these files is as follows:

1.<Link the executable as normal. Assuming that it is called>
"foo" then...

1.<Run "objcopy --only-keep-debug foo foo.dbg" to>
create a file containing the debugging info.

1.<Run "objcopy --strip-debug foo" to create a>
stripped executable.

1.<Run "objcopy --add-gnu-debuglink=foo.dbg foo">
to add a link to the debugging info into the stripped
executable.

Note---the choice of ".dbg" as an extension for the debug info file is arbitrary. Also the "--only-keep-debug" step is optional. You

could instead do this:

1.<Link the executable as normal.>

1.<Copy "foo" to "foo.full">

1.<Run "strip --strip-debug foo">

1.<Run "objcopy --add-gnu-debuglink=foo.full foo">

i.e., the file pointed to by the --add-gnu-debuglink can be the full executable. It does not have to be a file created by the --only-keep-debug switch.

Note---this switch is only intended for use on fully linked files.

It does not make sense to use it on object files where the debugging information may be incomplete. Besides the gnu_debuglink feature currently only supports the presence of one filename containing debugging information, not multiple filenames on a one-per-object-file basis.

-V

--version

Show the version number for strip.

-v

--verbose

Verbose output: list all object files modified. In the case of archives, strip -v lists all members of the archive.

@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.

the Info entries for binutils.

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