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Rocky Enterprise Linux 9.2 Manual Pages on command 'gold.1'

\$ man gold.1

GOLD(1) User Commands GOLD(1)

NAME

gold - The GNU ELF linker

SYNOPSIS

ld.gold [options] file...

OPTIONS

--help Report usage information

-v, --version

Report version information

-V Report version and target information

--add-needed

Not supported

--no-add-needed

Do not copy DT_NEEDED tags from shared libraries (default)

--allow-multiple-definition Allow multiple definitions of symbols

--no-allow-multiple-definition

Do not allow multiple definitions (default)

--allow-shlib-undefined

Allow unresolved references in shared libraries

--no-allow-shlib-undefined

Do not allow unresolved references in shared libraries (default)

--apply-dynamic-relocs

Apply link-time values for dynamic relocations (default)

--no-apply-dynamic-relocs
(aarch64 only) Do not apply link-time values for dynamic relocations

--as-needed
Use DT_NEEDED only for shared libraries that are used

--no-as-needed
Use DT_NEEDED for all shared libraries (default)

-assert [ignored]
Ignored

-b [elf,binary], --format [elf,binary]
Set input format

--be8 Output BE8 format image

--build-id [=STYLE]
Generate build ID note

--build-id-chunk-size-for-treehash SIZE
Chunk size for '--build-id=tree'

--build-id-min-file-size-for-treehash SIZE
Minimum output file size for '--build-id=tree' to work differently than
'--build-id=sha1'

-Bdynamic -l searches for shared libraries (default)

-Bstatic -l does not search for shared libraries

-dy alias for -Bdynamic (default)

-dn alias for -Bstatic

-Bgroup
Use group name lookup rules for shared library

-Bshareable
Generate shared library (alias for -G/-shared)

-Bno-symbolic
Don't bind default visibility defined symbols locally for -shared (default)

-Bsymbolic-functions
Bind default visibility defined function symbols locally for -shared

-Bsymbolic
Bind default visibility defined symbols locally for -shared

--check-sections

Check segment addresses for overlaps (default)

--no-check-sections

Do not check segment addresses for overlaps

--compress-debug-sections [none,zlib,zlib-gnu,zlib-gabi]

Compress .debug_* sections in the output file

--copy-dt-needed-entries

Not supported

--no-copy-dt-needed-entries Do not copy DT_NEEDED tags from shared libraries (default)

--cref

Output cross reference table

--no-cref

Do not output cross reference table (default)

--ctors-in-init-array

Use DT_INIT_ARRAY for all constructors (default)

--no-ctors-in-init-array

Handle constructors as directed by compiler

-d, --define-common

Define common symbols

--no-define-common

Do not define common symbols in relocatable output (default)

-dc Alias for -d

-dp Alias for -d

--debug [all,files,script,task][,...]

Turn on debugging

--defsym SYMBOL=EXPRESSION

Define a symbol

--demangle [=STYLE]

Demangle C++ symbols in log messages

--no-demangle

Do not demangle C++ symbols in log messages

--dependency-file FILE

Write a dependency file listing all files read

--detect-odr-violations

Look for violations of the C++ One Definition Rule

--no-detect-odr-violations

Do not look for violations of the C++ One Definition Rule (default)

--dynamic-list-data

Add data symbols to dynamic symbols

--dynamic-list-cpp-new

Add C++ operator new/delete to dynamic symbols

--dynamic-list-cpp-typeinfo Add C++ typeid to dynamic symbols

--dynamic-list FILE

Read a list of dynamic symbols

--emit-stub-syms

(PowerPC only) Label linker stubs with a symbol (default)

--no-emit-stub-syms

(PowerPC only) Do not label linker stubs with a symbol

-e ADDRESS, --entry ADDRESS Set program start address

--eh-frame-hdr

Create exception frame header

--no-eh-frame-hdr

Do not create exception frame header (default)

--enable-new-dtags

Enable use of DT_RUNPATH (default)

--disable-new-dtags

Disable use of DT_RUNPATH

--no-enum-size-warning

(ARM only) Do not warn about objects with incompatible enum sizes

--exclude-libs lib,lib ...

Exclude libraries from automatic export

-E, --export-dynamic

Export all dynamic symbols

--no-export-dynamic

Do not export all dynamic symbols (default)

--export-dynamic-symbol SYMBOL

Export SYMBOL to dynamic symbol table

-EB Link big-endian objects.

-EL Link little-endian objects.

-f SHLIB, --auxiliary SHLIB Auxiliary filter for shared object symbol table

-F SHLIB, --filter SHLIB
Filter for shared object symbol table

--fatal-warnings
Treat warnings as errors

--no-fatal-warnings
Do not treat warnings as errors (default)

-fini SYMBOL
Call SYMBOL at unload-time

--fix-arm1176
(ARM only) Fix binaries for ARM1176 erratum (default)

--no-fix-arm1176
(ARM only) Do not fix binaries for ARM1176 erratum

--fix-cortex-a8
(ARM only) Fix binaries for Cortex-A8 erratum

--no-fix-cortex-a8
(ARM only) Do not fix binaries for Cortex-A8 erratum (default)

--fix-cortex-a53-843419
(AArch64 only) Fix Cortex-A53 erratum 843419

--no-fix-cortex-a53-843419
(AArch64 only) Do not fix Cortex-A53 erratum 843419 (default)

--fix-cortex-a53-835769
(AArch64 only) Fix Cortex-A53 erratum 835769

--no-fix-cortex-a53-835769
(AArch64 only) Do not fix Cortex-A53 erratum 835769 (default)

--fix-v4bx
(ARM only) Rewrite BX rn as MOV pc, rn for ARMv4

--fix-v4bx-interworking
(ARM only) Rewrite BX rn branch to ARMv4 interworking veneer

-fuse-ld [gold,bfd]
Ignored for GCC linker option compatibility

-g Ignored

--gc-sections
Remove unused sections

--no-gc-sections
Don't remove unused sections (default)

--gdb-index
Generate .gdb_index section

--no-gdb-index
Do not generate .gdb_index section (default)

--gnu-unique
Enable STB_GNU_UNIQUE symbol binding (default)

--no-gnu-unique
Disable STB_GNU_UNIQUE symbol binding

-G, -shared
Generate shared library

-h FILENAME, -soname FILENAME
Set shared library name

--hash-bucket-empty-fraction FRACTION
Min fraction of empty buckets in dynamic hash

--hash-style [sysv,gnu,both]
Dynamic hash style

-i Alias for -r

--icf [none,all,safe]
Identical Code Folding. '--icf=safe' Folds ctors, dtors and functions whose pointers are definitely not taken

--icf-iterations COUNT
Number of iterations of ICF (default 3)

--incremental
Do an incremental link if possible; otherwise, do a full link and prepare output for incremental linking

--no-incremental
Do a full link (default)

--incremental-full

Do a full link and prepare output for incremental linking

--incremental-update

Do an incremental link; exit if not possible

--incremental-base FILE

Set base file for incremental linking (default is output file)

--incremental-changed

Assume files changed

--incremental-unchanged

Assume files didn't change

--incremental-unknown

Use timestamps to check files (default)

--incremental-startup-unchanged

Assume startup files unchanged (files preceding this option)

--incremental-patch PERCENT Amount of extra space to allocate for patches (default 10)

-init SYMBOL

Call SYMBOL at load-time

-I PROGRAM, --dynamic-linker PROGRAM

Set dynamic linker path

--just-symbols FILE

Read only symbol values from FILE

--keep-files-mapped

Keep files mapped across passes (default)

--no-keep-files-mapped

Release mapped files after each pass

--keep-unique SYMBOL

Do not fold this symbol during ICF

-l LIBNAME, --library LIBNAME

Search for library LIBNAME

--ld-generated-unwind-info

Generate unwind information for PLT (default)

--no-ld-generated-unwind-info

Do not generate unwind information for PLT

-L DIR, --library-path DIR

Add directory to search path

--long-plt

(ARM only) Generate long PLT entries

--no-long-plt

(ARM only) Do not generate long PLT entries (default)

-m EMULATION

Set GNU linker emulation; obsolete

--map-whole-files

Map whole files to memory (default)

--no-map-whole-files

Map relevant file parts to memory

--merge-exidx-entries

(ARM only) Merge exidx entries in debuginfo (default)

--no-merge-exidx-entries

(ARM only) Do not merge exidx entries in debuginfo

--mmap-output-file

Map the output file for writing (default)

--no-mmap-output-file

Do not map the output file for writing

-M, --print-map

Write map file on standard output

-Map MAPFILENAME

Write map file

-n, --nmagic

Do not page align data

-N, --omagic

Do not page align data, do not make text readonly

--no-omagic

Page align data, make text readonly (default)

--no-keep-memory

Use less memory and more disk I/O (included only for compatibility with GNU ld)

--no-undefined

Report undefined symbols (even with --shared)

--noinhibit-exec
Create an output file even if errors occur

-nostdlib
Only search directories specified on the command line

-o FILE, --output FILE
Set output file name

--ofORMAT [binary]
Set output format

-O LEVEL, -optimize LEVEL
Optimize output file size

--orphan-handling [place,discard,warn,error]
Orphan section handling

-p Ignored for ARM compatibility

-pie Create a position independent executable

-no-pie
Do not create a position independent executable (default)

--pic-executable
Create a position independent executable

--no-pic-executable
Do not create a position independent executable (default)

--pic-veneer
Force PIC sequences for ARM/Thumb interworking veneers

-no-pipeline-knowledge
(ARM only) Ignore for backward compatibility (default)

--plt-align [=P2ALIGN]
(PowerPC only) Align PLT call stubs to fit cache lines

--plt-localentry
(PowerPC64 only) Optimize calls to ELFv2 localentry:0 functions

--no-plt-localentry
(PowerPC64 only) Don't optimize ELFv2 calls (default)

--plt-static-chain
(PowerPC64 only) PLT call stubs should load r11

--no-plt-static-chain

(PowerPC64 only) PLT call stubs should not load r11 (default)

--plt-thread-safe

(PowerPC64 only) PLT call stubs with load-load barrier

--no-plt-thread-safe

(PowerPC64 only) PLT call stubs without barrier (default)

--plugin PLUGIN

Load a plugin library

--plugin-opt OPTION

Pass an option to the plugin

--posix-fallocate

Use posix_fallocate to reserve space in the output file (default)

--no-posix-fallocate

Use fallocate or ftruncate to reserve space

--power10-stubs [=auto,no,yes]

(PowerPC64 only) stubs use power10 insns

--no-power10-stubs

(PowerPC64 only) stubs do not use power10 insns

--preread-archive-symbols

Preread archive symbols when multi-threaded

--print-gc-sections

List removed unused sections on stderr

--no-print-gc-sections

Do not list removed unused sections (default)

--print-icf-sections

List folded identical sections on stderr

--no-print-icf-sections

Do not list folded identical sections (default)

--print-output-format

Print default output format

--print-symbol-counts FILENAME

Print symbols defined and used for each input

--push-state

Save the state of flags related to input files

--pop-state

Restore the state of flags related to input files

-q, --emit-relocs

Generate relocations in output

-Qy Ignored for SVR4 compatibility

-r, -relocatable

Generate relocatable output

--relax

Relax branches on certain targets

--no-relax

Do not relax branches (default)

--retain-symbols-file FILE

keep only symbols listed in this file

--rosegment

Put read-only non-executable sections in their own segment

--no-rosegment

Do not put read-only non-executable sections in their own segment (default)

--rosegment-gap OFFSET

Set offset between executable and read-only segments

-R DIR Add DIR to runtime search path

-rpath DIR

Add DIR to runtime search path

--rpath-link DIR

Add DIR to link time shared library search path

-s, --strip-all

Strip all symbols

-S, --strip-debug

Strip debugging information

--strip-debug-non-line

Emit only debug line number information

--strip-debug-gdb

Strip debug symbols that are unused by gdb (at least versions <= 7.4)

--strip-lto-sections

Strip LTO intermediate code sections (default)

--section-ordering-file FILENAME

Layout sections in the order specified

--section-start SECTION=ADDRESS

Set address of section

--secure-plt

(PowerPC only) Use new-style PLT (default)

--sort-common [{ascending,descending}]

Sort common symbols by alignment

--sort-section [none,name]

Sort sections by name. '--no-text-reorder' will override '--sort-section=name' for .text

--spare-dynamic-tags COUNT

Dynamic tag slots to reserve (default 5)

--stub-group-size SIZE

(ARM, PowerPC only) The maximum distance from instructions in a group of sections to their stubs. Negative values mean stubs are always after the group. 1 means use default size

--stub-group-multi

(PowerPC only) Allow a group of stubs to serve multiple output sections (default)

--no-stub-group-multi

(PowerPC only) Each output section has its own stubs

--split-stack-adjust-size SIZE

Stack size when -fsplit-stack function calls non-split

-static

Do not link against shared libraries

--start-lib

Start a library

--end-lib

End a library

--stats

Print resource usage statistics

--sysroot DIR

Set target system root directory

-t, --trace

Print the name of each input file

--target1-abs

(ARM only) Force R_ARM_TARGET1 type to R_ARM_ABS32

--target1-rel

(ARM only) Force R_ARM_TARGET1 type to R_ARM_REL32

--target2 [rel, abs, got-rel

(ARM only) Set R_ARM_TARGET2 relocation type

--text-reorder

Enable text section reordering for GCC section names (default)

--no-text-reorder

Disable text section reordering for GCC section names

--threads

Run the linker multi-threaded

--no-threads

Do not run the linker multi-threaded (default)

--thread-count COUNT

Number of threads to use

--thread-count-initial COUNT

Number of threads to use in initial pass

--thread-count-middle COUNT Number of threads to use in middle pass

--thread-count-final COUNT

Number of threads to use in final pass

--tls-optimize

(PowerPC/64 only) Optimize GD/LD/IE code to IE/LE (default)

--no-tls-optimize

(PowerPC/64 only) Don't try to optimize TLS accesses

--tls-get-addr-optimize

(PowerPC/64 only) Use a special __tls_get_addr call (default)

--no-tls-get-addr-optimize

(PowerPC/64 only) Don't use a special __tls_get_addr call

--toc-optimize

(PowerPC64 only) Optimize TOC code sequences (default)

--no-toc-optimize

(PowerPC64 only) Don't optimize TOC code sequences

--toc-sort

(PowerPC64 only) Sort TOC and GOT sections (default)

--no-toc-sort

(PowerPC64 only) Don't sort TOC and GOT sections

-T FILE, --script FILE

Read linker script

-Tbss ADDRESS

Set the address of the bss segment

-Tdata ADDRESS

Set the address of the data segment

-Ttext ADDRESS

Set the address of the text segment

-Ttext-segment ADDRESS

Set the address of the text segment

-Trodata-segment ADDRESS

Set the address of the rodata segment

-u SYMBOL, --undefined SYMBOL

Create undefined reference to SYMBOL

--unresolved-symbols ignore-all,report-all,ignore-in-object-files,ignore-in-shared-libs

How to handle unresolved symbols

--verbose

Alias for --debug=files

--version-script FILE

Read version script

--warn-common

Warn about duplicate common symbols

--no-warn-common

Do not warn about duplicate common symbols (default)

--warn-constructors

Ignored

--no-warn-constructors

Ignored

--warn-drop-version

Warn when discarding version information

--no-warn-drop-version

Do not warn when discarding version information (default)

--warn-execstack

Warn if the stack is executable

--no-warn-execstack

Do not warn if the stack is executable (default)

--no-warn-mismatch

Don't warn about mismatched input files

--warn-multiple-gp

Ignored

--warn-search-mismatch

Warn when skipping an incompatible library (default)

--no-warn-search-mismatch

Don't warn when skipping an incompatible library

--warn-shared-textrel

Warn if text segment is not shareable

--no-warn-shared-textrel

Do not warn if text segment is not shareable (default)

--warn-unresolved-symbols

Report unresolved symbols as warnings

--error-unresolved-symbols

Report unresolved symbols as errors (default)

-z build

Dummy z option

--no-wchar-size-warning

(ARM only) Do not warn about objects with incompatible wchar_t sizes

--weak-unresolved-symbols

Convert unresolved symbols to weak references

--whole-archive

Include all archive contents

--no-whole-archive

Include only needed archive contents (default)

--wrap SYMBOL

Use wrapper functions for SYMBOL

-x, --discard-all

Delete all local symbols

-X, --discard-locals

Delete all temporary local symbols

--discard-none

Keep all local symbols

-y SYMBOL, --trace-symbol SYMBOL

Trace references to symbol

--undefined-version

Allow unused version in script (default)

--no-undefined-version

Do not allow unused version in script

-Y PATH

Default search path for Solaris compatibility

-(, --start-group

Start a library search group

-), --end-group

End a library search group

-z bndplt

(x86-64 only) Generate a BND PLT for Intel MPX

-z nobndplt

Generate a regular PLT (default)

-z combreloc

Sort dynamic relocs (default)

-z nocombreloc

Do not sort dynamic relocs

-z common-page-size=SIZE

Set common page size to SIZE

-z defs

Report undefined symbols (even with --shared)

-z execstack

Mark output as requiring executable stack

-z global

Make symbols in DSO available for subsequently loaded objects

-z initfirst

Mark DSO to be initialized first at runtime

-z interpose

Mark object to interpose all DSOs but executable

-z unique

Mark DSO to be loaded at most once, and only in the main namespace

-z nunique

Do not mark the DSO as one to be loaded only in the main namespace (default)

-z lazy

Mark object for lazy runtime binding (default)

-z loadfltr

Mark object requiring immediate process

-z max-page-size=SIZE

Set maximum page size to SIZE

-z muldefs

Allow multiple definitions of symbols

-z nocopyreloc

Do not create copy relocs

-z nodefaultlib

Mark object not to use default search paths

-z nodelete

Mark DSO non-deletable at runtime

-z nodlopen

Mark DSO not available to dlopen

-z nodump

Mark DSO not available to dldump

-z noexecstack

Mark output as not requiring executable stack

-z now Mark object for immediate function binding

-z origin

Mark DSO to indicate that needs immediate \$ORIGIN processing at runtime

-z relro

Where possible mark variables read-only after relocation (default)

-z norelro

Don't mark variables read-only after relocation

-z stack-size=SIZE

Set PT_GNU_STACK segment p_memsz to SIZE

-z start-stop-visibility=[default,internal,hidden,protected]

ELF symbol visibility for synthesized `__start_*` and `__stop_*` symbols

-z text

Do not permit relocations in read-only segments

-z notext

Permit relocations in read-only segments (default)

-z textoff

Permit relocations in read-only segments (default)

-z text-unlikely-segment

Move `.text.unlikely` sections to a separate segment.

-z notext-unlikely-segment

Do not move `.text.unlikely` sections to a separate segment. (default)

-z keep-text-section-prefix Keep `.text.hot`, `.text.startup`, `.text.exit` and `.text.unlikely`

as separate sections in the final binary.

-z nokeep-text-section-prefix

Merge all `.text.*` prefix sections. (default)

debian/tmp/usr/bin/ld.gold: supported targets: elf32-x86-64 elf32-x86-64-freebsd

elf32-x86-64-nacl elf64-x86-64 elf64-x86-64-freebsd elf64-x86-64-nacl elf32-iamcu

elf32-i386 elf32-i386-freebsd elf32-i386-nacl debian/tmp/usr/bin/ld.gold: supported emula?

tions: elf32_x86_64 elf32_x86_64_nacl elf_x86_64 elf_x86_64_nacl elf_iamcu elf_i386

elf_i386_nacl

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GOLD(1)