coreboot - Bug #90

GRUB fails to build under Debian testing

01/25/2017 11:51 PM - Nathaniel Roach

Status:	In Progress		**Start date:**	01/25/2017
Priority:	Normal		**Due date:**	
Assignee:			**% Done:**	0%
Category:	build system		**Estimated time:**	0.00 hour
Target version:				

Description

Debain did something funny with the toolchain a while back, but apparently coreboot had worked around it. I rebuilt crossgcc with -b last night and that didn't solve the issue.

config.status: creating grub-reboot
Making all in grub-core
/usr/bin/ld: -r and -pie may not be used together
collect2: error: ld returned 1 exit status

If I tweak payloads/external/GRUB2/Makefile such that line 43 has CFLAGS="-O2 -fno-pie" TARGET_CFLAGS="-Os -no-pie" it builds but then SeaBIOS won't run the grub payload:

Booting from CBFS...
Run img/grub
Segment 464c457f 16777216@0xff9291b8 -> 8519680@0x02000300
No support for compression type 10101
enter handle_18:
NULL
Booting from Hard Disk...

History

#1 - 01/31/2017 08:27 AM - Paul Menzel

Commit a3e9da05 (configure: add check for -no-pie if the compiler default to -fPIE) should have fixed the build issue in GRUB.

commit a3e9da054d00260f274cfd9d1b9611c32ecd437c
Author: Magnus Granberg <>
AuthorDate: Wed Dec 14 20:44:41 2016 +0300
Commit: Andrei Borzenkov <>
CommitDate: Wed Dec 14 20:44:41 2016 +0300

    configure: add check for -no-pie if the compiler default to -fPIE

    When Grub is compile with gcc 6.1 that have --enable-defult-pie set.
    It fail with.
    -ffreestanding   -m32 -Wl,-melf_i386 -Wl,--build-id=none -nostdlib -Wl,-N -Wl,-r,-d   -
    o trig.module trig_module-trigtables.o
    grep 'MARKER' gcry_whirlpool.marker.new > gcry_whirlpool.marker; rm -f
    gcry_whirlpool.marker.new
    /usr/lib/gcc/x86_64-pc-linux-gnu/6.1.0/../../../../x86_64-pc-linux-gnu/bin/ld: -r and -
    shared may not be used together
    collect2: error: ld returned 1 exit status
    Makefile:26993: recipe for target 'trig.module' failed

    Check that compiler supports -no-pie and add it to linker flags.

With that I can successfully build the master branch from GRUB with the toolchain from Debian (Sid/unstable).

Please create a separate ticket for the other issue, and add how you add the GRUB ELF file to the CBFS image.

$ git log --oneline -1
970af16 vgasrc: Increase debug level
$ git grep "No support for com"

src/fw/coreboot.c: dprintf(1, "No support for compression type %x\n"

#2 - 02/03/2017 04:10 PM - Nathaniel Roach

I created a new copy of the git tree and built from scratch in there - it all seemed to work fine. I'm a little confused as I did rebuild the toolchain, but it works now so I'm not fussed.

Cheers for your time.

#3 - 03/10/2017 02:36 PM - SGS IT

I'm still getting this issue with the latest coreboot code on Debian Stretch, when adding GRUB as primary payload. Is there a workaround?

#4 - 03/10/2017 02:55 PM - Paul Menzel

- Status changed from New to In Progress

SGS IT, are you using GRUB master? Please post your configuration file (.config).

#5 - 03/10/2017 04:39 PM - SGS IT

- File dotconfig added

Thanks for replying so quickly, Paul. Yes I am - config file attached.

#6 - 03/10/2017 04:46 PM - Paul Menzel

Indeed, GRUB master is used. Just to be sure, could you please delete the folder grub(?) in payloads/external/GRUB2/, and rerun the build. If it doesn't work, please paste the build error.

PS: Also please note, coreboot is officially written all lowercase.

#7 - 03/10/2017 05:07 PM - SGS IT

Apologies for the incorrect casing. I still get the following error after deleting the grub2 folder (same as OP)

```
config.status: creating grub-reboot
Making all in grub-core
/usr/bin/ld: -r and -pie may not be used together
collect2: error: ld returned 1 exit status
Makefile:24260: recipe for target 'disk.module' failed
make[5]: *** [disk.module] Error 1
Makefile:23531: recipe for target 'all' failed
make[4]: *** [all] Error 2
Makefile:10897: recipe for target 'all-recursive' failed
make[3]: *** [all-recursive] Error 1
Makefile:3123: recipe for target 'all' failed
make[2]: *** [all] Error 2
Makefile:49: recipe for target 'grub2' failed
make[1]: *** [grub2] Error 2
payloads/external/Makefile.inc:134: recipe for target 'grub2' failed
make: *** [grub2] Error 2
```

#8 - 03/10/2017 05:11 PM - Paul Menzel

No idea right now. More next week.

Maybe one more thing. cd payloads/external/GRUB2/grub2 and then please post the output of git status, and git log --oneline -1.

Also, can you build GRUB manually?

```
$ ./autogen.sh
$ ./configure --with-platform=coreboot
$ make
$ make default_payload.elf
```

#9 - 03/10/2017 06:04 PM - SGS IT

```
$ git status
On branch master

Your branch is up-to-date with 'origin/master'.
Untracked files:
  (use "git add <file>..." to include in what will be committed)

    build/

nothing added to commit but untracked files present (use "git add" to track)


$ git log --oneline -1
bcf3c5553 xen: Fix wrong register in relocator.
```

A manual build of GRUB completes successfully.

Files

dotconfig		21.8 KB	03/10/2017	SGS IT