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Author	**Topic: Mach-O 64-bit format does not support 32-bit absolute**

rouki

Jr. Member

Posts: 5

Mach-O 64-bit format does not support 32-bit absolute addresses
« **on:** July 12, 2014, 04:20:44 PM »

Hey guys 🙂 The aforementioned error (At the title) occurs in the following code (Compiling in OS X - mach-o 64)

arr: dd 0x0FFFFFFF, 0x03020100, 0x07060504, 0x0B0A0908

movdqa xmm5, oword[arr]

What's the reason?
Any suggestions?

thanks in advance

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gammac

Jr. Member

Posts: 71
Country: 00

Re: Mach-O 64-bit format does not support 32-bit absolute addresses
« **Reply #1 on:** July 12, 2014, 05:10:42 PM »

I don't know, but I know that movdqa needs an aligned address. Therefore, I think arr must be aligned at 16.

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Please comment your code! It helps to help you.

Frank Kotler

NASM Developer
Hero Member

Re: Mach-O 64-bit format does not support 32-bit absolute addresses
« **Reply #2 on:** July 12, 2014, 05:40:21 PM »

Posts: 2490
Country: 🇺🇸

I can confirm that this happens. Assembling as "-f elf64" or "-f win64" works fine. Using "default rel" or "movdqa xmm5, oword [rel arr]" works fine. I don't know why "-f macho64" thinks this is a 32-bit address. I suspect a bug, but I don't really know what "-f macho64" is "supposed" to do. Can you live with "rel"?

I would "expect" that a misaligned address would assemble without error, but would crash when you run it.

Thanks for the feedback!

Best,
Frank

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Cyrill Gorcunov

NASM Developer
Full Member
⬛⬛⬛⬛⬛

Posts: 176
Country: 00

Re: Mach-O 64-bit format does not support 32-bit absolute addresses
« **Reply #3 on:** July 13, 2014, 09:50:48 AM »

Indeed looks like a MachO64 bug, but can't say for sure since I'm not really familiar with this output format. Once time permit I'll take a look but better guys file a bug please.

Logged

Keith Kanios

Full Member
🟨🟨

Posts: 383
Country: 🇺🇸
🌐

Re: Mach-O 64-bit format does not support 32-bit absolute addresses
« **Reply #4 on:** September 20, 2014, 04:46:35 PM »

For any issues of "Mach-O 64-bit format does not support 32-bit absolute addresses", use **DEFAULT REL** at the top of your source code.

Also, that message may cause general troubleshooting confusion as 64-bit Mach-O really lacks support for absolute 32-bit symbols, as you can easily use 32-bit immediate numbers (e.g. 0x000B8000) without issue per the x86-64 instruction set.

Offhand, I think defaulting to REL whenever macho64 is used would probably be the real fix in this case.

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