
Subject: Re: NaN Magic or Why Me?!

Posted by [David Fanning](#) on Tue, 13 Nov 2007 17:54:39 GMT

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Mort Canty writes:

> Seriously, can someone, anyone, tell me might be going on?

Coyote me dijo, "Voy a vaccciones de Mexico." No se que el va en su lugar. Lo siento. :-(

Adios,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Subject: Re: NaN Magic or Why Me?!

Posted by [Brian Larsen](#) on Tue, 13 Nov 2007 17:58:05 GMT

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Wow that is fun. I have seen this before when I had a misplaced pointer somewhere, they are offer hard to find, adding in help, /heap at various places may help you figure out where it is... if this is even the problem.

Cheers,

Brian

Brian Larsen

Boston University

Center for Space Physics

Subject: Re: NaN Magic or Why Me?!

Posted by [Mort Canty](#) on Tue, 13 Nov 2007 18:30:50 GMT

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David Fanning schrieb:

> Mort Canty writes:
>
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>
> Adios,
>
> David

My Spanish is weak-to-nonexistent, David, but Coyote is passing on this one, si?

Mort

Subject: Re: NaN Magic or Why Me?!
Posted by [Rick Towler](#) on Tue, 13 Nov 2007 18:38:08 GMT
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Mort Canty wrote:

> I'd like to post the code so you, too, can amaze your friends,
> but unfortunately the trick only works on my bloody computer.
>
> Seriously, can someone, anyone, tell me might be going on?

How many other computers have you tried this on? Make/Model/Processor?

Just a guess, but MS released "A microcode reliability update that improves the reliability of systems that use Intel processors". They're talking the Core 2 architecture (Core 2 variants and Xeon 3x and 5x). I believe that this was delivered as a critical update via the automagic update system so you may already have it installed but it would be worth checking.

More info is here: <http://support.microsoft.com/kb/936357>

-Rick

Subject: Re: NaN Magic or Why Me?!
Posted by [David Fanning](#) on Tue, 13 Nov 2007 18:42:47 GMT
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Mort Canty writes:

> My Spanish is weak-to-nonexistent, David, but Coyote is passing on this
> one, si?

Actually, I think he is somehow involved. It has
his fingerprints all over it. :-(

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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Subject: Re: NaN Magic or Why Me?!

Posted by [Mort Canty](#) on Tue, 13 Nov 2007 19:36:52 GMT

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Rick Towler schrieb:

>
>
> Mort Canty wrote:
>
>> I'd like to post the code so you, too, can amaze your friends,
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> update system so you may already have it installed but it would be worth
> checking.
>
> More info is here: <http://support.microsoft.com/kb/936357>
>
> -Rick

The errors occur on an ACER Veriton 7800 with intel P4 650, and
Lakeport-G i945G chipset running XP Professional SP2. So I guess it has
nothing to do with the MS update. I get no errors on my ASUS core-duo
laptop with the same OS (it's not here just now, so I don't know the
details). Ditto on an older P4 no-name with same software. I'll try a

few more, though, thanks.

Mort

Subject: Re: NaN Magic or Why Me?!

Posted by [R.G.Stockwell](#) on Tue, 13 Nov 2007 20:08:49 GMT

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"Mort Canty" <m.canty@fz-juelich.de> wrote in message
news:fhcua7\$b06o\$1@zam602.zam.kfa-juelich.de...

> The errors occur on an ACER Veriton 7800 with intel P4 650, and Lakeport-G
> i945G chipset running XP Professional SP2. So I guess it has nothing to do
> with the MS update. I get no errors on my ASUS core-duo laptop with the
> same OS (it's not here just now, so I don't know the details). Ditto on an
> older P4 no-name with same software. I'll try a few more, though, thanks.

Can you reproduce the problem with a small subset of the code
(hopefully with some randomly generated data) and post it
here?

Cheers,
bob

Subject: Re: NaN Magic or Why Me?!

Posted by [Mort Canty](#) on Tue, 13 Nov 2007 20:30:44 GMT

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R.G. Stockwell schrieb:

>
> Can you reproduce the problem with a small subset of the code
> (hopefully with some randomly generated data) and post it
> here?

>
>
> Cheers,
> bob

>
>
Hi Bob,

I hope so, but it's a fairly big program. It's getting late here in
Germany, so I'll try to distill things out tomorrow. Thanks for the

interest.

Mort

Subject: Re: NaN Magic or Why Me?!

Posted by [Mort Canty](#) on Wed, 14 Nov 2007 14:48:56 GMT

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R.G. Stockwell schrieb:

> "Mort Canty" <m.canty@fz-juelich.de> wrote in message
> news:fhcua7\$b06o\$1@zam602.zam.kfa-juelich.de...
>
>> The errors occur on an ACER Veriton 7800 with intel P4 650, and Lakeport-G
>> i945G chipset running XP Professional SP2. So I guess it has nothing to do
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>
>
> Can you reproduce the problem with a small subset of the code
> (hopefully with some randomly generated data) and post it
> here?
>
>
> Cheers,
> bob
>

Having reduced the code, as you suggested, to what I assumed to be "the essentials", the problem disappeared. So now I'll have to put back "the inessentials" one-by-one until the NaNs re-appear. Tedious, but maybe also a good way of tracking it down. I'll get back here later (I hope).

Cheers,

Mort

Subject: Re: NaN Magic or Why Me?!

Posted by [Rick Towler](#) on Wed, 14 Nov 2007 17:45:02 GMT

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Mort Canty wrote:

> Rick Towler schrieb:
>>
>>

```

>> Mort Canty wrote:
>>
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> laptop with the same OS (it's not here just now, so I don't know the
> details). Ditto on an older P4 no-name with same software. I'll try a
> few more, though, thanks.

```

Since your code runs fine on 2 out of 3 computers the problem most likely is hardware based. Since you've swapped your SO-DIMM, and this is a laptop, you don't have many options left.

RAM->BIOS->Heat->Power

Even late in a processor's life cycle, there are a number of "errata" that exist. Generally workarounds are implemented either in the BIOS or in the OS. I would get the latest BIOS available for your laptop. Also, try disabling hyperthreading in the BIOS. You never know...

If your processor has active cooling ensure that the fan and heatsink are clean and that the fan spins freely. If this is an actual P4 650 "Prescott", aka Pres-Hot, heat is a real issue. Stick it in the refrigerator while you test it.

Power issues are tricky to diagnose in laptops but if the above steps don't help, and you tend to get errors while the system is loaded, there could be components in your AC/DC adapter or the regulators on the mainboard that are marginal. All you really can do is look for obvious defects like bulging or leaking capacitors or swap the adapter if you can.

HTH,

-r
