
Subject: Re: Ghost object

Posted by [davidf](#) on Tue, 15 Aug 2000 07:00:00 GMT

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Pavel Romashkin (promashkin@cmdl.noaa.gov) writes:

> My point, actually, was that I thought .Full_reset_session was pretty
> much the same as starting over. I guess it is not in those cases when
> IDL gets a little upset.

Scene at a medium-sized computer software company. Tight
shot of cubicle piled high with copies of PC World and
Byte magazines. Our hero talks on the phone.

Hero: Why don't you just exit IDL and try it again?

Customer: I did start over. It always happens.

Hero: Uh, huh. Well, just to humor me exit IDL and try it
again.

Customer: It won't make a difference.

Hero: Uh, huh. But just to humor me. Please.

Customer: Sigh...I already tried that, but here you go.

(45 seconds of typing can be heard on the phone lines.)

Customer: OK, I did that and it is still broken.

Hero: You exited IDL!?

Customer: Well, no. I thought .Reset_Session was the same thing.

Hero (an audible hitch in his voice): Well, how about you
just try exiting IDL and run it again.

Customer: Oh, friggin hell! Alright, I exited IDL and
Oh ... well, never mind.

(Sound of phone being hung up.)

Cheers,

David

--

David Fanning, Ph.D.

Subject: Re: Ghost object

Posted by [Craig Markwardt](#) on Tue, 15 Aug 2000 07:00:00 GMT

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I don't really know IDL objects from my oss, but it sounds like some *other* compiled IDL function or method was creating the font object. If by any chance you edited the source but forgot to recompile it, then this could have happened. When you restart the IDL session then it finally was recompiled anew.

I do this kind of thing once in a while (edit but forget to compile), and it leaves me very confused. However, you say you were recompiling, so that doesn't seem like the right solution. Oh well.

Craig

Pavel Romashkin <promashkin@cmdl.noaa.gov> writes:

> Hi,
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> by looping through object fields and destroying objects and pointers.
> Once its done, I'd call our favorite Heap_gc to see if there was a leak.
> Sure enough, it was always finding and deleting an instance of
> IDLGRFONT. I tried everything I could: commented out the only line where
> IDLGRFONT was used, tried all sorts of explicit object destruction
> immediately after creation, etc. I felt it was not my fault, so I tried
> "Clear IDL" and .Reset, and .Full_reset. Same thing: once I recompile,
> run and kill the object tree, IDLGRFONT would still always be found by
> Heap_gc. It was not a fake, as its heap ID would be always higher each time.
> Frustrated, I quit IDL and restarted. What do you think? It stopped
> doing that. I swear the code is the same, because I went through every
> single line checking it, saved it, tried it, got a leak and quit IDL.
> But after restart IDLGRFONT stopped appearing in the heap.
> I have no idea what it was, but it certainly complicated my leak search.
> Does anybody have an explanation?
> Thanks,
> Pavel

--

Craig B. Markwardt, Ph.D. EMAIL: craigmnet@cow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response

Subject: Re: Ghost object
Posted by [promashkin](#) on Tue, 15 Aug 2000 07:00:00 GMT
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David Fanning wrote:

>
> Pavel Romashkin (promashkin@cmdl.noaa.gov) writes:
>
>> Etc.
>> Does anybody have an explanation?
>
> Yes, but I'm saving it for the IDL EPA exam. :-)

Geez, David, I thought you were supposed to *ask* questions, not to keep *answers* to them, on that exam. Or are you being tested, too? Well, at least let me know what it is after you are done torturing Ben. Also, don't forget to ask "what do you do when the only color you get on a plot is red?" :-)

Cheers,
Pavel

P.S. My own answer: "Introducing myself: I am IDL, I run here on this danged overheated PPC for hours with no stopping. So what, I got confused here for a while. I thought you wanted that object to be around longer. I'd like to see how you'd do in my place running at 400 MHz, if you think you are so perfect and you are not even letting me have a 5 minute break".

Subject: Re: Ghost object
Posted by [promashkin](#) on Tue, 15 Aug 2000 07:00:00 GMT
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David Fanning wrote:

>
> One of the best parts of my training in IDL was being
> for some years a Technical Support Engineer. I learned
> not to even listen to the problem until the person had
> quit IDL and started over. That cleared up about 95%
> of my calls and made me a superstar among the brethren. :-)

Oh, but this implies that, *after* restarting IDL, someone *might* actually listen? This is encouraging!

My point, actually, was that I thought `.Full_reset_session` was pretty much the same as starting over. I guess it is not in those cases when IDL gets a little upset.

Cheers,
Pavel

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> I have no idea what it was, but it certainly complicated my leak search.

Etc., etc., etc.

> Does anybody have an explanation?

Yes, but I'm saving it for the IDL EPA exam. :-)

Cheers,

David

P.S. Let's just say now would be a good time to put
on that Lauridsen Lux Aeterna CD and light a candle. :-)

--

David Fanning, Ph.D.

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Subject: Re: Ghost object

Posted by [promashkin](#) on Wed, 16 Aug 2000 07:00:00 GMT

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David Fanning wrote:

>
> Pavel Romashkin (promashkin@cmdl.noaa.gov) writes:
>
>> And... here again comes IDLGRFONT, Array[1].
>
> Uh, you're not using one of my programs, are you. :-(

Nope. And it is not happening today, either. The code is untouched. I am convinced it is a one-time glitch (that sometimes repeats at regular intervals :-)

Solution: I'll just quit IDL to let it rest over the lunch break :-)

Cheers,

Pavel

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Posted by [promashkin](#) on Wed, 16 Aug 2000 07:00:00 GMT

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Martin Schultz wrote:

> .. but: suppose you create the font object while testing your object,
> then you edit
> and recompile while the object is still alive, removing the cleanup of
> something
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> a situation
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> after you exit and
> restart, and doesn't show up again: why bother? I would only bother if
> you thought
> your program had finished the development stage and the error occurs

> reproducibly
> when running the code.
>
> Martin

Thanks Martin, this would be an explanation. I tried to design this code "leakproof". The object exists only for as long as its top base exists. If its killed, cleanup is performed. I never execute the *creation* code while its alive, only the event handling routine. Every single object used in it was placed in a container to be wiped by the cleanup routine. All objects are IDLgr***, so nothing I use is calling IDLGRFONT from behind my back. Can compilation by itself create an instance of an object? That would be strange.

Well, I'd leave it as it was, but yesterday, after *quitting* IDL and starting over, everything was just fine for an hour. I was happy with how it all worked, and never edited that part of the code again, developing other parts. And... here again comes IDLGRFONT, Array[1]. I recorded the number of objects created by my code and compared them with the number of objects in containers, and I do remove everything I make. Something else somewhere is creating that one. In fact, if I don't place the *only* instance of IDLGRFONT I made in a container, then I get this one remaining in the heap, too, so I end up with two leftover objects. Strange. If this persists, I'll ask people to test the code on their machines. I am beginning to think if accessing IDLgrText objects may in some instances cause them to lose their Font objects? I have used them before and never noticed that.

Cheers,
Pavel

P.S. If my first theory of tired IDL is true, then I should not see this again till noon at least :-)

Subject: Re: Ghost object
Posted by [Paul van Delst](#) on Wed, 16 Aug 2000 07:00:00 GMT
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> Pavel Romashkin (promashkin@cmdl.noaa.gov) writes:
>
>> Does anybody have an explanation?
>
> I learned not to even listen to the problem until the person had
> quit IDL and started over.

Wow, I wasn't aware RSI employed MicroSoft Software Fix techniques.

that's too bad.

--

Paul van Delst Ph: (301) 763-8000 x7274
CIMSS @ NOAA/NCEP Fax: (301) 763-8545
Rm.202, 5200 Auth Rd. Email: pvandelst@ncep.noaa.gov
Camp Springs MD 20746

Subject: Re: Ghost object

Posted by [Martin Schultz](#) on Wed, 16 Aug 2000 07:00:00 GMT

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Craig Markwardt wrote:

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```
--
[[ Dr. Martin Schultz  Max-Planck-Institut fuer Meteorologie  [[
[[ Bundesstr. 55, 20146 Hamburg                               [[
[[ phone: +49 40 41173-308                                     [[
[[ fax: +49 40 41173-298                                       [[
[[ martin.schultz@dkrz.de                                     [[
[[
```

- > An engineer, a physicist, and a programmer are driving in a car
- > when it suddenly stops in the middle of nowhere. The engineer:
- > 'Shoot, we ran out of gas!' The physicist: 'This is probably an
- > engine problem.' The programmer: 'Let's exit the car, we enter
- > again, and everything will be fine.'

Page 9 of 13 ---- Generated from [comp.lang.idl-pvwave archive](#)

be unleashed without exiting the program. I can't explain it, but I have observed it too many times not to be a firm believer in it.

I think Pavel's original explanation is pretty close to the truth. Software that runs in heated conditions for hours at 400 Hz can get flustered. Exiting the program gives the software a chance to compose itself. It is sort of like taking the screaming baby out of the hands of a young mother for five minutes. It puts the Universe back in order and makes it possible to move forward.

An alternative technique is to have the instructor come up and look over your shoulder while you demonstrate the problem. The downfall of this technique is that it only has a 75-80% success rate.

Of course, the over-the-shoulder technique works in reverse too. Try to demo a perfectly working program to anyone higher than you on the food chain and there is at least a 75-80% chance that the program will crash in the first 30 seconds.

Cheers,

David

P.S. Let's just say life is a Mystery, and I like it that way. :-)

--

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Posted by [Theo Brauers](#) on Wed, 16 Aug 2000 07:00:00 GMT

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Best Theo

David Fanning wrote:

```
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> Scene at a medium-sized computer software company. Tight
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>
> Hero: Why don't you just exit IDL and try it again?
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> Customer: I did start over. It always happens.
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> Hero: Uh, huh. Well, just to humor me exit IDL and try it
> again.
>
> Customer: It won't make a difference.
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> Hero: Uh, huh. But just to humor me. Please.
>
> Customer: Sigh...I already tried that, but here you go.
>
> (45 seconds of typing can be heard on the phone lines.)
>
> Customer: OK, I did that and it is still broken.
>
> Hero: You exited IDL!?
>
> Customer: Well, no. I thought .Reset_Session was the same thing.
>
> Hero (an audible hitch in his voice): Well, how about you
> just try exiting IDL and run it again.
>
> Customer: Oh, friggin hell! Alright, I exited IDL and .....
> Oh ... well, never mind.
>
> (Sound of phone being hung up.)
>
> Cheers,
>
> David
> --
```

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--

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Subject: Re: Ghost object
Posted by [promashkin](#) on Thu, 17 Aug 2000 07:00:00 GMT
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Well, I got that problem to repeat itself. Although I have no idea what causes it, I am now convinced it is a bug. Here is what happens. Thanks to Randall Frank for suggestion to use head numbers to locate the source of leaking heap variable, it helped.

The "ghostfont" is caused to appear by the following line in the code:

```
self.scene -> add, view
```

If this line is commented out, the ghost "IDLgrFont" does not appear.
If IDL is restarted, it does not appear with this line present either,
until .Reset_session is not invoked several times (I have not tested, how many exactly). .Full_reset_session does not cure the problem. I could provide code snippets but I'll just send output logs:

```
***Comment out "self.scene -> add, view", compile, run.  
IDL> display  
*** Perform cleanup, but leave all code-created FONT ant TEXT objects undeleted.  
IDL> widget_control, /reset & close, /all & heap_gc, /verbose & retall  
<ObjHeapVar3123>  
      STRUCT  = -> IDLGRFONT Array[1]  
<ObjHeapVar3156>  
      STRUCT  = -> IDLGRTEXT Array[1]  
<ObjHeapVar3160>  
      STRUCT  = -> IDLGRTEXT Array[1]  
***All of these were made by the code. First TEXT is 33 references  
***after the code-created FONT.  
***Uncomment "self.scene -> add, view" and recompile, run  
% Compiled module: DISPLAY.
```

```
IDL> display
TEMP (PARGRPLOT_TOP_WINDOW)
    OBJREF  = <ObjHeapVar3179(PARGRPLOT)>
IDL> widget_control, /reset & close, /all & heap_gc, /verbose & retail
<ObjHeapVar3190>
    STRUCT  = -> IDLGRFONT Array[1]
<ObjHeapVar3223>
    STRUCT  = -> IDLGRTEXT Array[1]
<ObjHeapVar3227>
    STRUCT  = -> IDLGRTEXT Array[1]
<ObjHeapVar3245>
    STRUCT  = -> IDLGRFONT Array[1]
***First three these made by the code. First TEXT is 33 references
***after the code-created FONT.
***Second instance of IDLGRFONT appears AFTER everything else.
```

I have no idea what exactly is going on, but adding a view to a scene should not cause this. Looks like a bug in .Reset_session.

Cheers,
Pavel

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Posted by [promashkin](#) on Thu, 17 Aug 2000 07:00:00 GMT
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Well I certainly appreciate Martin's Virus warning. Its been a while since I laughed so hard.

On a more serious note, I'd like myself to find out that it was an error in my code. One good advice Randall Frank gave me is to use heap head numbers to track down when that suspect was created. If I see it again, I'll do that and confess to the public that it was my fault, or otherwise.

Thanks for your attention to the infestation of my computer.

Cheers,
Pavel
