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Subject: Re: How to debug seg fault.

Posted by [David Fanning](#) on Mon, 20 Mar 2006 20:13:32 GMT

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Jonathan Joseph writes:

> I'm running IDL 6.0 on a sun workstation under solaris 8.  
>  
> I have a pretty elaborate GUI program, that with the same set of  
> actions, I can reproducibly cause IDL to terminate with a segmentation  
> fault.  
>  
> I'm trying to debug this problem, but it's almost impossible because if  
> I add a print statement to the code, I no longer get the crash.  
> Likewise, if I step through in IDLDE, I don't get the crash.  
>  
> This seems like a classic memory access problem, but I can't figure out  
> how to pinpoint the problem - which may be having other unseen  
> ramifications.

I've seen this problem before! I just can't remember  
anything about it. :-(

Is it possible it has to do with temporary variables?

I'm laying brick today. This will give me something to  
think about other than how much my back hurts. :-)

Cheers,

David

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David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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Subject: Re: How to debug seg fault.

Posted by [Paolo Grigis](#) on Tue, 21 Mar 2006 08:52:21 GMT

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This may or may not be related... but we had IDL hanging (not  
seg-faulting, though) on LINUX with GUI widgets because of some  
kind of X synch problem with errors like:

%Xlib: unexpected async reply

Similarly, adding print statements solved the problem (probably because causing some delays in the timings?).

Ciao,  
Paolo

Jonathan Joseph wrote:

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> how to pinpoint the problem - which may be having other unseen  
> ramifications.  
>  
> Any advice appreciated.  
>  
> Thanks.  
>  
> -Jonathan

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Subject: Re: How to debug seg fault.

Posted by [Jonathan Joseph](#) on Tue, 21 Mar 2006 16:44:53 GMT

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I spent much of yesterday making slight tweaks and trying to pinpoint the problem. It was actually not until I quit my GUI application that IDL would crash with a segmentation fault (or sometimes a bus error).

I also upgraded to 6.2, but surprisingly, that didn't help.

One other strange thing was that I run software on two slightly different machines (a sun blade1000 and a sun blade2000 both running the same OS and sharing disks so that they were using exactly the same IDL executable and code paths), and I would get the crash on the blade1000 but not on the blade2000.

In the end, I found that I could reproduce the crash only when I had left some text selected (usually it had to be down past the first 50 lines) in a large scrollable text widget in a window that was used to

display a PDS image label.

I eventually "solved" the problem by putting a line of code in the widget cleanup routine that deselected any text that might be selected in the text widget.

I can no longer reproduce the crash at any rate.

I'm wondering if there might be some memory issue buried in the IDL code for selections in text widgets that has the ability to cause such a problem under just the right conditions.

At any rate, the problem is gone for now, but if this scenerio rings a bell for anyone, I'd like to hear about it.

Thanks.

-Jonathan

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