Subject: Re: idl_idlbridge weirdness on unix systems
Posted by Yngvar Larsen on Wed, 29 Feb 2012 17:03:53 GMT
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On Feb 28, 10:34 pm, Mark Piper <mpi...@ittvis.com> wrote:
> On 2/28/2012 10:49 AM, Yngvar Larsen wrote:
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>
>> I encountered a strange problem today while working with IDL child
>> processes instantiated using the IDL_IDLBridge class. Specifically, I
>> want to be able to use a lot of subprocesses on a 4 CPU x 12-kernel
>> server, so I tried using 48 IDL_IDLBridge objects to test the system.
>> But no cigar. IDL hangs apparently at random. I narrowed down the
>> problem to the following.
>
>> The simple code below just instantiates an array of objects, and then
>> tries to destroy them one by one. What happens (for me) is that when
>> it encounters index ii=16, the entire IDL process hangs.
>
>> N = 17
>> b = objarr(N)
>> for ii=0, N-1 do b[ii]=obj_new('idl_idlbridge')
>
>> for ii=0, N-1 do begin
>> status = b[ii]->status() ; Just to make sure the object is idle
>> (status = 0)
>> print, ii, status
>> obj_destroy, b[ii]
>> endfor
>
>> Now comes the weird part; the following almost identical code, where I
>> just destroy the objects in the opposite order, works fine always!
>
>> N = 17
>> b = objarr(N)
>> for ii=0, N-1 do b[ii]=obj_new('idl_idlbridge')
>
>> for ii=N-1,0,-1 do begin
>> status = b[ii]->status() ; Just to make sure the object is idle
>> (status = 0)
>> print, ii, status

>>   obj_destroy, b[ii]
>> endfor
>
>> I have tried this with identical results on the following systems:
>> IDL 7.0.8, Linux 2.6.20 (old Fedora system)
>> IDL 8.1, Linux 2.6.32 (new Red Hat system)
>> IDL 8.1 Linux 2.6.32 (Ubuntu 10.04 LTS)
>> IDL 7.1.1, Mac OS X 10.6.8
>
>> However, I tested it on the following system with no problems:
>> IDL 6.4, Windows XP
>
>> Anyone else with similar experience?
>
>> --
>> Yngvar
>
> Hi Yngvar,
>
> There's currently an open CR on this (64611, for your reference); I'll
> add you to the report. Tech Support has also identified a possible
> workaround. Please contact them if you're interested.
>
> mp

Thanks.

My own workaround (destroying the objects in the opposite order of how they were created) seems to work reliably on my system, so I'm fine for the time being. If I run into more problems, I'll contact tech support before wasting more time.

Two questions:
1) Like David, I would like to know where to look up/track known issues (if such a place exists). Could be a time saver sometimes...

2) Is there a standard way to submit bugs/feature requests? I have one rather important issue that is part bug, part feature request: Decent TIFF/BigTIFF-support. In order to stay relevant for the remote sensing community, this is a must. A lot of satellite data are delivered in (Geo)TIFF format, and the typical size of some satellite products is approaching or surpassing the 4-GB limit for the TIFF format.

- Bug: READ_TIFF (at least on unix) only supports TIFF files up to 2 GB even though the TIFF standard is defined up to 4 GB. I suspect a signed 32-bit integer is used internally instead of an unsigned 32-bit integer to represent the file offsets (?), wasting one bit.

- Feature request: BigTIFF support. My research group (in an earth observation department) at work already had to implement a rudimentary BigTIFF-reader for some very important data.

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Yngvar