Subject: Re: Asynchronous IDL IDLBridge causing memory leak Posted by Seth Johnson on Fri, 27 Aug 2010 18:39:08 GMT

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Sorry, I realized there was a mistake in the second example, it should be:

oBridge=OBJARR(5) FOR chain=0,4 DO BEGIN oBridge[chain]=Obj New('IDL IDLBridge')

FOR i=0,999 DO BEGIN FOR chain=0.4 do BEGIN a=bindgen(1E4,1E3) oBridge[chain]->SetVar,'a',a oBridge[chain]->Execute, 'a=a+a', /NOWAIT **ENDFOR**

FOR chain=0,4 DO WHILE oBridge[chain]->Status() NE 0 DO wait,0.0001 **ENDFOR** OBJ_DESTROY,oBridge

I do not destroy the objects until the very end as there are parameters and routines that need to be loaded into each IDL_IDLBridge for various computations in addition to parameters that change with every iteration. Destroying and recreating would be a rather large boon to processing time while the initial problem caused by asynchronous operation still remains.

Subject: Re: Asynchronous IDL_IDLBridge causing memory leak Posted by Juggernaut on Mon, 30 Aug 2010 12:35:20 GMT

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On Aug 27, 2:39 pm, Seth Johnson <seth.spjoh...@gmail.com> wrote:

- > Sorry, I realized there was a mistake in the second example, it should
- > be:
- >
- > oBridge=OBJARR(5)
- > FOR chain=0,4 DO BEGIN oBridge[chain]=Obj_New('IDL_IDLBridge')
- > FOR i=0.999 DO BEGIN
- FOR chain=0,4 do BEGIN >
- a=bindgen(1E4,1E3) >
- oBridge[chain]->SetVar,'a',a >
- oBridge[chain]->Execute, 'a=a+a', /NOWAIT >
- **ENDFOR** >
- FOR chain=0,4 DO WHILE oBridge[chain]->Status() NE 0 DO wait,0.0001

```
ENDFOROBJ_DESTROY,oBridge
```

> I do not destroy the objects until the very end as there are

- > parameters and routines that need to be loaded into each IDL_IDLBridge
- > for various computations in addition to parameters that change with
- > every iteration. Destroying and recreating would be a rather large
- > boon to processing time while the initial problem caused by
- > asynchronous operation still remains.

I've noticed that leak in 6.3 but not in 7.0+. Which version are you running?

Subject: Re: Asynchronous IDL_IDLBridge causing memory leak Posted by Seth Johnson on Mon, 30 Aug 2010 14:02:01 GMT View Forum Message <> Reply to Message

```
On Aug 30, 8:35 am, Bennett < juggernau...@gmail.com> wrote:
> On Aug 27, 2:39 pm, Seth Johnson <seth.spjoh...@gmail.com> wrote:
>
>
>> Sorry, I realized there was a mistake in the second example, it should
  be:
>> oBridge=OBJARR(5)
>> FOR chain=0,4 DO BEGIN oBridge[chain]=Obj New('IDL IDLBridge')
>> FOR i=0,999 DO BEGIN
     FOR chain=0,4 do BEGIN
       a=bindgen(1E4,1E3)
>>
       oBridge[chain]->SetVar,'a',a
       oBridge[chain]->Execute, 'a=a+a', /NOWAIT
>>
     ENDFOR
>>
     FOR chain=0,4 DO WHILE oBridge[chain]->Status() NE 0 DO wait,0.0001
>> ENDFOR
>> OBJ_DESTROY,oBridge
>> I do not destroy the objects until the very end as there are
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> I've noticed that leak in 6.3 but not in 7.0+. Which version are you
```

> running?

Strange, I have tested this on IDL versions 7.0 and 7.1, both of which produce the leak. Could the cause perhaps lie in the setup or one of the required packages? I have noticed while testing on different machines that 7.0 and 7.1 use different versions of the shared library libstdc++.so.

Subject: Re: Asynchronous IDL_IDLBridge causing memory leak Posted by Seth Johnson on Tue, 31 Aug 2010 15:31:59 GMT View Forum Message <> Reply to Message

```
On Aug 30, 10:02 am, Seth Johnson <seth.spjoh...@gmail.com> wrote:
> On Aug 30, 8:35 am, Bennett < juggernau...@gmail.com> wrote:
>
>
>
>> On Aug 27, 2:39 pm, Seth Johnson <seth.spjoh...@gmail.com> wrote:
>>> Sorry, I realized there was a mistake in the second example, it should
>>> be:
>>> oBridge=OBJARR(5)
>>> FOR chain=0,4 DO BEGIN oBridge[chain]=Obj New('IDL IDLBridge')
>>> FOR i=0,999 DO BEGIN
      FOR chain=0,4 do BEGIN
        a=bindgen(1E4,1E3)
>>>
        oBridge[chain]->SetVar,'a'.a
>>>
        oBridge[chain]->Execute, 'a=a+a', /NOWAIT
>>>
      ENDFOR
>>>
      FOR chain=0,4 DO WHILE oBridge[chain]->Status() NE 0 DO wait,0.0001
>>> ENDFOR
>>> OBJ_DESTROY,oBridge
>
>>> I do not destroy the objects until the very end as there are
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>>> for various computations in addition to parameters that change with
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It is not the most elegant of solutions, but I have found a temporary work around for the memory leak. Rather than calling the asynchronous processes from the main routine, I create a single child process that then creates its own children and performs the asynchronous calls similar to:

```
oBridge=Obj_New('IDL_IDLBridge')
oBridge->SetVar,'a',a
oBridge->Execute,"oBridge=Obj_New('IDL_IDLBridge')"
oBridge->Execute,"oBridge->SetVar,'a',a"
FOR i=0,999 DO BEGIN
tmp=memory()
oBridge->Execute,"oBridge->Execute,'a=a+a',/NOWAIT"
print,memory(/high)
WHILE oBridge->GetVar('oBridge->Status()') NE 0 DO wait,0.0001
ENDFOR
```

The child process (and its children) do not appear to leak memory as the parent call does. I find it rather peculiar that this method works, even after loading the IDL startup file into the child processes.

Subject: Re: Asynchronous IDL_IDLBridge causing memory leak Posted by Russell Ryan on Fri, 18 Jan 2013 17:56:19 GMT View Forum Message <> Reply to Message

Forgive me for waking the dead and releasing the zombie posts. But I've noticed a similar behavior on IDL 8.1. From a little testing, I've found that if I put calls to systime() and memory() on either side of the Bridge->Execute,/nowait call I can see (1) the time to start an asynchronous call and (2) it's memory usage increase with time. I'll try implementing this ugly-looking work around and see what ITT has to say about it?

-Russell

```
On Tuesday, August 31, 2010 11:31:59 AM UTC-4, Seth Johnson wrote:

> On Aug 30, 10:02 am, Seth Johnson <seth.spjoh...@gmail.com> wrote:

>> On Aug 30, 8:35 am, Bennett <juggernau...@gmail.com> wrote:

>>

>>
```

```
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>>>> FOR i=0.999 DO BEGIN
      FOR chain=0.4 do BEGIN
>>>>
         a=bindgen(1E4,1E3)
>>>>
         oBridge[chain]->SetVar,'a',a
>>>>
         oBridge[chain]->Execute, 'a=a+a', /NOWAIT
>>>>
       ENDFOR
>>>>
>>
>>>>
       FOR chain=0,4 DO WHILE oBridge[chain]->Status() NE 0 DO wait,0.0001
>>>> ENDFOR
>>> OBJ DESTROY,oBridge
>>
>>>> I do not destroy the objects until the very end as there are
>>> parameters and routines that need to be loaded into each IDL IDLBridge
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> oBridge=Obj_New('IDL_IDLBridge')
> oBridge->SetVar,'a',a
> oBridge->Execute,"oBridge=Obj_New('IDL_IDLBridge')"
> oBridge->Execute, "oBridge->SetVar, 'a', a"
> FOR i=0,999 DO BEGIN
    tmp=memory()
>
    oBridge->Execute, "oBridge->Execute, 'a=a+a', /NOWAIT"
```

- > print,memory(/high)
 > WHILE oBridge->Ge
 - WHILE oBridge->GetVar('oBridge->Status()') NE 0 DO wait,0.0001
- > ENDFOR

>

- > The child process (and its children) do not appear to leak memory as
- > the parent call does. I find it rather peculiar that this method
- > works, even after loading the IDL startup file into the child
- > processes.

Subject: Re: Asynchronous IDL_IDLBridge causing memory leak Posted by Russell Ryan on Sat, 26 Jan 2013 18:27:16 GMT View Forum Message <> Reply to Message

I've been emailing folks at Exelis about this. They've now issued a formal bug report to the engineers. I'll repost if I learn of any answers...

R

On Friday, January 18, 2013 12:56:19 PM UTC-5, rr...@stsci.edu wrote:

> Forgive me for waking the dead and releasing the zombie posts. But I've noticed a similar behavior on IDL 8.1. From a little testing, I've found that if I put calls to systime() and memory() on either side of the Bridge->Execute,/nowait call I can see (1) the time to start an asynchronous call and (2) it's memory usage increase with time. I'll try implementing this ugly-looking work around and see what ITT has to say about it?

```
>
 -Russell
>
>
>
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>
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>>>> > FOR i=0,999 DO BEGIN
>>>> FOR chain=0,4 do BEGIN
>>>> >
          a=bindgen(1E4,1E3)
        oBridge[chain]->SetVar,'a',a
>>>> >
>>>> >
          oBridge[chain]->Execute,'a=a+a',/NOWAIT
         ENDFOR
>>>> >
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>> oBridge->Execute,"oBridge=Obj_New('IDL_IDLBridge')"
>> oBridge->Execute, "oBridge->SetVar, 'a', a"
>> FOR i=0,999 DO BEGIN
      tmp=memory()
>>
      oBridge->Execute, "oBridge->Execute, 'a=a+a', /NOWAIT"
>>
```

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>> print,memory(/high)
>> WHILE oBridge->GetVar('oBridge->Status()') NE 0 DO wait,0.0001
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>
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>> works, even after loading the IDL startup file into the child
>> processes.
```

Subject: Re: Asynchronous IDL_IDLBridge causing memory leak Posted by chris_torrence@NOSPAM on Wed, 31 Jul 2013 19:21:02 GMT View Forum Message <> Reply to Message

Hi all,

Just FYI, the memory leak with the IDL_IDLBridge (bug 43494) has been fixed for IDL 8.3. IDL 8.3 should be out sometime later in the Fall.

Cheers, Chris ExelisVIS

Subject: Re: Asynchronous IDL_IDLBridge causing memory leak Posted by Haje Korth on Thu, 01 Aug 2013 12:45:21 GMT View Forum Message <> Reply to Message

Chris.

this is really good news for one of my projects!

Thanks,

Haje

On Wednesday, July 31, 2013 3:21:02 PM UTC-4, Chris Torrence wrote:

> Hi all,

> >

> Just FYI, the memory leak with the IDL_IDLBridge (bug 43494) has been fixed for IDL 8.3. IDL

.3 should be out sometime later in the Fall.	
Cheers,	
Chris	
ExelisVIS	