Subject: Re: IDL_IDLBridge and SHMMAP - shared memory not found
Posted by Jim Pendleton on Tue, 06 Mar 2012 14:37:41 GMT

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On Tuesday, March 6, 2012 2:41:28 AM UTC-7, Percy Pugwash wrote:
> I'm trying to do some processing in "in the background" using the IDL_IDLBridge object. I want to avoid making unnecessary copies of all the data, and also gain the speed benefits mentioned here: https://groups.google.com/d/topic/comp.lang.idl-pvwave/fRXH- lDbdKc/discussion
>
> So, I am using the shmmap and shmvar functionality to share the data.
>
> shmmap,size=size(image),get_name=shmname
> var = shmvar(shmname)
> var[0,0] = image
>
> The IDL_IDLBridge object seems to be working OK
>
> bridge->setvar,'nlevels',nlevels
> bridge->setvar,'shmname',shmname
> bridge->execute,'makePyramid,nlevels,shmname=shmname'
>
> The problem seems to be that the shmmapped memory does not seem to be visible from the child IDL process. When I get run the execute method of bridge as above, I get the following error:
>
> IDL_IDLBRIDGE Error: SHMVAR: Shared Memory Segment not found: IDL_SHM_700_0
>
> However, I can see using help,/shared_memory (while the IDE is paused in debug mode) that the sought-after shared memory segment does indeed exist.
>
> IDL> help,/shared_memory
> IDL_SHM_700_0 BYTE   = <WindowsAnonymous(IDL_SHM_700_0), Offset(0), Refcnt(0)> Array[5120, 5696]
>
> Why can't the child process see the shared memory?
>
> I am using 64-bit IDL on Windows XP.
>
> P

One key here, depending on your platform and the type of shared memory you're creating, is the not-so-obvious os_handle keyword to shmmap. Once you find a pattern of os_handle and segmentname parameters that works for you, you tend not to have to think about it again.

In IDL process 1:

pro shared1
shmmap, 'firstsegment', dimension = 5, template = {widget_draw}, $
   os_handle = 'percy'

```
v = shmvar('firstsegment')
v[0].modifiers = 1
help,/str,v[0]
end
```

In IDL process 2:

```
pro shared2
shmmap, template = {widget_draw}, get_name = gn, $
   os_handle = 'percy', dimension = 5
pv = ptr_new(shmvar(gn))
help,/str,(*pv)[0]
print, gn
end
```

Jim P.