Subject: shmmap error
Posted by Russell Ryan on Sun, 20 Jul 2014 16:43:27 GMT
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I'm trying to create a large shared memory segment using the System V memory. This is the command I try to issue:

IDL> shmmap,type=4,dimension=[20000,20000],get_name=seg,get_os_ha ndle=os,/sysv

To create a 2d floating point array of 20,000 by 20,000. I get the following error:

% SHMMAP: Unable to create shared memory segment.
Invalid argument

When I first go this error, I thought it was because the sysv maximum memory was set below this mark. So I reset the kernel setting the file:

/etc/sysctl.conf

with the value: kern.sysv.shmmax=1073741824 to allow 1 Gb of shared memory. This didn't fix the problem. I then tried creating the same memory segment to be 2,000 by 2,000 (still floating point) and got a slightly different error:

IDL> shmmap,type=4,dimension=[2000,2000],get_name=seg,get_os_hand le=os,/sysv
% SHMMAP: Unable to create shared memory segment.
Cannot allocate memory

So, now I'm puzzled. Does anyone have an idea to fix this and still use System V memory? If not, can I have shmmap return an error or status so I can have the code safely avoid crashing?

To be clear, I've tried on two different computers, both running Mac OS 8, but one is IDL 7.1 and other is IDL 8.1. These are the relevant SHM settings in my sysctl:

prompt> sysctl -a | grep shm
kern.sysv.shmmax: 1073741824
kern.sysv.shmmin: 1
kern.sysv.shmmni: 32
kern.sysv.shmseg: 8
kern.sysv.shmall: 1024
machdep.pmap.hashmax: 28
security.mac.posixshm_enforce: 1
security.mac.sysvshm_enforce: 1

Thanks! Russell

PS, I'm doing this to create an IDL object to interface with ds9 (an astronomical image viewing routine). ds9 (and XPA tools) seem to only want sysv memory segments. IF any astronomer

knows to the contrary and knows how to POSIX memory that would be a fine work-around.

Subject: Re: shmmap error
Posted by Russell Ryan on Mon, 21 Jul 2014 14:51:06 GMT
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PPS. I guess my heart is not set on using shared memory segments. I just want to avoid writing the data from IDL to the disk, then reading the new file into ds9. So, I'm open to other suggestions possibly using the socket functionally in IDL.

R

On Sunday, July 20, 2014 12:43:27 PM UTC-4, rr...@stsci.edu wrote:
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