
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_handle=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_handle=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.
