Subject: Re: How to allocate memory for an array of more than 2G
Posted by Karl[1] on Wed, 14 Jul 2010 19:14:16 GMT
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On Jul 13, 9:45 pm, "R.G. Stockwell" <noem...@please.com> wrote:
> "NEW-IDL-USER" <mchen...@gmail.com> wrote in message
>
> news:c5a17126-f507-41bf-84d9-6260b9f0ec33@i18g2000pro.google groups.com...
>
>
>
>> Hi,
>> I have a trouble to read a .h5 file which is about 3G.
>> I am using {x86_64 linux unix linux 7.1.1 Aug 21 2009 64 64} IDL. So
>> you see, my system is 64 bit and IDL is also 64 bit. The problem I
>> cannot allocate a memory for an array more than 2G. I do not know why?
>> Can someone help me?
>> Thanks a lot!
>
>> IDL> help,/memory
>> heap memory used: 818394, max: 1074560678, gets: 1069,
>> frees: 258
>> IDL> a=bytarr(1024,1024,1024)
>> IDL> help,/memory
>> heap memory used: 1074560268, max: 1074560367, gets: 1081,
>> frees: 269
>> IDL> a=bytarr(1024,1024,1024)
>> % Unable to allocate memory: to make array.
>> Cannot allocate memory
>
> Hello New,
> I have no idea why you cannot allocate that memory.
> In fact, you call a = bytarr() twice, so it looks like you can
> only allocate one gig. How much memory is on your machine?
>
> And are there quotas involved on the IDL process (perhaps you should
> ask your sys admin).
>
> for instance, you should be able to do this.
>
> IDL> a=bytarr(1024,1024,1024)
> IDL> b=bytarr(1024,1024,1024)
> IDL> c=bytarr(1024,1024,1024)
> IDL> d=bytarr(1024,1024,1024)
> IDL> help,/mem
> heap memory used: 4303438407, max: 4303438540, gets: 107997, frees:
> 98790
> IDL> e=bytarr(1024,1024,1024)

> IDL> f=bytarr(1024,1024,1024)
> IDL> help,/mem
> heap memory used: 6450922396, max: 6450922529, gets: 108015, frees:
> 98806
>
> cheers,
> bob

Quotas are a good thing to check. Also, check the page file size. A small RAM size and small page file size will restrict the amount of virtual memory your process can allocate. Increasing RAM would give you the best-performing improvement. But you could theoretically add a page file or expand an existing page file and still (slowly) solve the problem.

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