Subject: Memory problem
Posted by weertj on Mon, 28 Nov 1994 02:06:43 GMT
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When I am using local structures in procedures, every time I will lose about
24 bytes (minimum) of the available memory. Also (for example) when I click
the mouse in a drawing area about 100 bytes are gone. By the way this memory
is really gone because after some time the machine will run out of memory!

Do anyone has the same problem, or is there an solution.

I am running Pv-Wave on a DEC-Alpha workstation (this is maybe part of the
problem).

-Jacco-

BT

NNNN

Subject: Re: Memory problem
Posted by Kenneth P. Bowman on Thu, 14 Feb 2008 14:51:33 GMT
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In article
<bf8e2253-81b6-4b03-ba46-83848d60d8e3@s19g2000prg.googlegroups.com>,
 jujo@argentina.com wrote:

> Hi!
> I'm trying to make a very large array:
>
> a=fltarr(5287, 7707, 8)
>
> Then I got the warning: 'Unable to allocate memory: to make array.'
>
> Is there any way to avoid this message?
>
> Best!
> Jurandir

You are trying to make an array that requires

IDL> print, 5287*7707*8*4
  1303901088

about 1.3 GB.

This is doable on a 32-bit system (assuming that you have 2 GB of RAM),
but you will not be able to create two such arrays.

Try

HELP, /MEM

to see how much memory you are using before you try to create the array.

Ken Bowman

Subject: Re: Memory problem
Posted by Jean H. on Thu, 14 Feb 2008 18:32:47 GMT
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jujo@argentina.com wrote:
> Hi!
> I'm trying to make a very large array:
>
> a=fltarr(5287, 7707, 8)
>
> Then I got the warning: 'Unable to allocate memory: to make array.'
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> Jurandir

yes, you can buy more memory and/or switch to linux.

Under Windows, you can have, by definition, at most 2Gb of ram per
process (3Gb indeed, if you trick your system... have anybody tried it
with IDL 7??), while under linux, you have no limit.

Now, IDL always need contiguous memory space to create an array. Under
windows, the operating system uses some small amount of memory located
anywhere, so you can never have more than +- 1.2Gb of contiguous memory.
Under Linux, the operating system uses the beginning of the memory
space, allowing much bigger arrays to be created.

You array is about 1.2 Gb. You can create an array of 8 pointers, each
pointing to a 5287 * 7707 array, which are about 155 Mb.

Another option is to cut down your array in two or more. For example,
you create arrays of a maximum size of 500 * 500 * 7 (whatever), and you

create multiple arrays to contains all your data. Like that, you can
save and restore some arrays to your disk (and therefore free some memory)!

Have a look at the program memtest made by ittvis. It will tell you the
size of the 10 biggest array you can make. I have made a modified
version (search in this newsgroup for "availablememory" or under my name
  (jean H) to find it. I use it often to 1) assess the max available
memory, 2) take out the memory that I will need to process my array, 3)
create 1 array of the max possible size, fill it, save it to disk,
remove from memory, 4) create another array etc, 5) restore the first
array, process it, delete it, 6) restore the 2nd array, process it etc.

Good luck with that!
Jean

Subject: Re: Memory problem
Posted by zhouqiang.search on Thu, 14 Feb 2008 18:57:08 GMT
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On 14 Feb, 07:32, j...@argentina.com wrote:
> Hi!
> I'm trying to make a very large array:
>
> a=fltarr(5287, 7707, 8)
>
> Then I got the warning: 'Unable to allocate memory: to make array.'
>
> Is there any way to avoid this message?
>
> Best!
> Jurandir

I can allocate the array with the same size , I think there is
something wrong with your computer or IDL version , mine is IDL 6.3.

Subject: Re: Memory problem
Posted by Jean H. on Thu, 14 Feb 2008 20:11:08 GMT
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zhouqiang.search@gmail.com wrote:
> On 14 Feb, 07:32, j...@argentina.com wrote:
>> Hi!
>> I'm trying to make a very large array:
>>
>> a=fltarr(5287, 7707, 8)

>>
>> Then I got the warning: 'Unable to allocate memory: to make array.'
>>
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>>
>> Best!
>> Jurandir
>
> I can allocate the array with the same size , I think there is
> something wrong with your computer or IDL version , mine is IDL 6.3.

???? ... before blaming the software or the computer, it would be wise
to ask what is the memory available on the OP computer as well as the
operating system.

Jean

Subject: Re: Memory problem
Posted by zhouqiang.search on Fri, 15 Feb 2008 15:48:41 GMT
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On 14 Feb, 15:11, Jean H <jghas...@DELTHIS.ucalgary.ANDTHIS.ca> wrote:
> zhouqiang.sea...@gmail.com wrote:
>> On 14 Feb, 07:32, j...@argentina.com wrote:
>>> Hi!
>>> I'm trying to make a very large array:
>
>>> a=fltarr(5287, 7707, 8)
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>> something wrong with your computer or IDL version , mine is IDL 6.3.
>
> ???? ... before blaming the software or the computer, it would be wise
> to ask what is the memory available on the OP computer as well as the
> operating system.
>
> Jean

I think you are right , I am a wholly new comer with IDL , I just
output my result for reference,thanks a lot .

Diving here , I can learn more.

Subject: Re: Memory problem
Posted by greg.addr on Fri, 15 Feb 2008 16:52:43 GMT
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> IDL> print, 5287*7707*8*4
> 1303901088
>
> about 1.3 GB.
>
> This is doable on a 32-bit system (assuming that you have 2 GB of RAM),
> but you will not be able to create two such arrays.

That certainly isn't doable on my 32-bit XP system (2 GB) - its
limit's just under 1 GB for a single allocation. I've recently started
using a 64-bit XP exactly to get around this problem. The new system
seems to be able to allocate properly up to the limit of RAM (I've
tried to 8 GB):

IDL> a=bytarr(8,1000,1000,1000,/nozero)

Greg

Subject: Re: Memory problem
Posted by Kenneth P. Bowman on Fri, 15 Feb 2008 19:53:56 GMT
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In article
<55a45ed0-d7ea-4e0f-8cc7-7c619e4e3a9a@e23g2000prf.googlegroups.com>,
greg.addr@googlemail.com wrote:

>> IDL> print, 5287*7707*8*4
>> 1303901088
>>
>> about 1.3 GB.
>>
>> This is doable on a 32-bit system (assuming that you have 2 GB of RAM),
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> limit's just under 1 GB for a single allocation. I've recently started
> using a 64-bit XP exactly to get around this problem. The new system
> seems to be able to allocate properly up to the limit of RAM (I've
> tried to 8 GB):

>
> IDL> a=bytarr(8,1000,1000,1000,/nozero)
>
> Greg

Oh, I should have assumed it was Windows.

Ken

Subject: Re: Memory problem
Posted by pook41 on Sat, 16 Feb 2008 11:21:13 GMT
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On Feb 14, 10:32 pm, j...@argentina.com wrote:
> Hi!
> I'm trying to make a very large array:
>
> a=fltarr(5287, 7707, 8)
>
> Then I got the warning: 'Unable to allocate memory: to make array.'
>
> Is there any way to avoid this message?
>
> Best!
> Jurandir

Try 64 bit windows with 64 bit IDL? Here's what I get with 4GB of
RAM :-

IDL Version 6.4, Microsoft Windows (Win32 x86_64 m64). (c) 2007, ITT
Visual Information Solutions

IDL> a=fltarr(5287, 7707, 8)
IDL> help,/mem
heap memory used: 1304694831, max: 1304694831, gets: 505,
frees: 190
IDL> b=fltarr(5287, 7707, 8)
IDL> help,/mem
heap memory used: 2608596228, max: 2608596359, gets: 517,
frees: 199
IDL> c=fltarr(5287, 7707, 8)
IDL> help,/mem
heap memory used: 3912497625, max: 3912497756, gets: 529,
frees: 208
IDL> d=fltarr(5287, 7707, 8)
IDL> help,/mem
heap memory used: 5216399022, max: 5216399153, gets: 541,

frees: 217

Cheers,

Andrew
