Subject: Re: why I can't use the max memory available?
Posted by David Fanning on Thu, 17 May 2007 17:42:10 GMT
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Jenny writes:

> Hi, I'm trying to use pcomp to calculate pca for a large number of
> variables, say over 10,000, only 6 observations though. I'm not sure
> if I'd obtain useful results by pca, but just want to give a try. On
> Windows XP Professional system IDL 6.3, I got the following error
> message: Unable to allocate memory: to make array
>
> However, when I type: help,/memory
> heap memory used: 2082561, max: 825942109, gets: 811,
> frees: 468
>
> My heap memory used is far smaller than the max available memory! I'm
> wondering why? Any ideas?

Try here:

http://www.dfanning.com/fileio_tips/lgfiles.html

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.dfanning.com/
Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: why I can't use the max memory available?
Posted by envi35@yahoo.ca on Thu, 17 May 2007 20:23:51 GMT
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On May 17, 1:42 pm, David Fanning <n...@dfanning.com> wrote:
> Jenny writes:
>> Hi, I'm trying to use pcomp to calculate pca for a large number of
>> variables, say over 10,000, only 6 observations though. I'm not sure
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> Cheers,
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> David
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> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:http://www.dfanning.com/
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Thanks!

Subject: Re: why I can't use the max memory available?
Posted by Jean H. on Thu, 17 May 2007 22:19:39 GMT
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Jenny wrote:
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> variables, say over 10,000, only 6 observations though. I'm not sure
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> My heap memory used is far smaller than the max available memory! I'm
> wondering why? Any ideas?
>
> Thanks,
> Jenny

You can have a look at
http://groups.google.com/group/comp.lang.idl-pvwave/msg/660e d64ccfe3a78d
or you can download the 'memtest' procedure from ITTVIS in order to
retrieve (or simply see if you use memtest) the size of the biggest
array you can create!

Jean

Subject: Re: why I can't use the max memory available?
Posted by Rick Towler on Mon, 21 May 2007 22:21:29 GMT
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David Fanning wrote:
> Jenny writes:
>
>> Hi, I'm trying to use pcomp to calculate pca for a large number of
>> variables, say over 10,000, only 6 observations though. I'm not sure
>> if I'd obtain useful results by pca, but just want to give a try. On
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>> My heap memory used is far smaller than the max available memory! I'm
>> wondering why? Any ideas?
>
> Try here:
>
> http://www.dfanning.com/fileio_tips/lgfiles.html

David, you may want to add a bit of detail regarding adding the /3GB switch to windows XP boot.ini file (which is what Karl is addressing in point 1). This definitely will open up a larger chunk of contiguous RAM on 32bit machines with >3GB of RAM but I have run into a few issues. Namely, certain drivers may fail to load correctly when using the /3GB switch. Giving the kernel just a wee bit more space seems to solve the problem. This can be done using the /USERVA switch. Here's an example from my boot.ini file (all on one line):

multi(0)disk(0)rdisk(0)partition(2)\WINDOWS="Microsoft Windows XP Professional 3GB USERVA 2900" /fastdetect /3GB /userva=2900

It is interesting to note that the /3GB switch also works on machines with 3GB of RAM installed. I don't know exactly how RAM is apportioned between application and kernel in this scenario but the address space for applications definitely is bigger. The /USERVA switch is even more useful here since wherever the line is drawn, the kernel is in a tight place and you can get some weird behaviors.

More details can be found here:

http://support.microsoft.com/kb/833721

-Rick