
Subject: Random 'Unable to allocate memory' error
Posted by [Kai Heckel](#) on Tue, 13 Oct 2015 13:43:37 GMT
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Hello everyone!

I am currently processing a time series. For some reasons the 'Unable to allocate memory' error occurs sometimes. I don't know the reasons as the appearance ist not systematic. Sometimes the error occurs sometime not. I can say that is not file specific.

Any Ideas?

Thanks,
Kai

Subject: Re: Random 'Unable to allocate memory' error
Posted by [Kai Heckel](#) on Tue, 13 Oct 2015 14:31:20 GMT
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One more thing I should mention.
I am processing parallel (2 processes). Those two should not exceed the memory limit of the server.

Subject: Re: Random 'Unable to allocate memory' error
Posted by [Heinz Stege](#) on Tue, 13 Oct 2015 15:46:37 GMT
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Hello Kai,

could it be caused by memory fragmentation? For more see
<http://www.exelisvis.com/Support/HelpArticles/TabId/185/ArtM ID/800/ArticleID/3441/3441.aspx>

Cheers, Heinz

Subject: Re: Random 'Unable to allocate memory' error
Posted by [Haje Korth](#) on Tue, 13 Oct 2015 18:11:40 GMT
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I assume this is Windows OS. Did you try the 64-bit version of IDL?

On Tuesday, October 13, 2015 at 9:43:42 AM UTC-4, Kai Heckel wrote:

> Hello everyone!
>

> I am currently processing a time series. For some reasons the 'Unable to allocate memory' error occurs sometimes. I don't know the reasons as the appearance ist not systematic. Sometimes the error occurs sometime not. I can say that is not file specific.

>

> Any Ideas?

>

> Thanks,

> Kai

Subject: Re: Random 'Unable to allocate memory' error
Posted by [Kai Heckel](#) on Wed, 14 Oct 2015 07:44:31 GMT

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Am Dienstag, 13. Oktober 2015 20:11:47 UTC+2 schrieb Haje Korth:

> I assume this is Windows OS. Did you try the 64-bit version of IDL?

>

> On Tuesday, October 13, 2015 at 9:43:42 AM UTC-4, Kai Heckel

> wrote:

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>>

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>> Any Ideas?

>>

>> Thanks,

>> Kai

Thanks for your suggestions so far!

I am processing on a linux server. So it shouldn't be anything Windows related.

Subject: Re: Random 'Unable to allocate memory' error
Posted by [Haje Korth](#) on Wed, 14 Oct 2015 11:15:38 GMT

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Hm, I thought you could indeed be suffering from memory fragmentation, but I thought this is only a windows issue. Since you are on linux, you should be automatically using 64 bit as the 32 bit version is no longer included in recent releases. In this case, I really don't know what causes your issue. I would check with support.

On Wednesday, October 14, 2015 at 3:44:35 AM UTC-4, Kai Heckel wrote:

> Am Dienstag, 13. Oktober 2015 20:11:47 UTC+2 schrieb Haje Korth:

>> I assume this is Windows OS. Did you try the 64-bit version of IDL?
>>
>> On Tuesday, October 13, 2015 at 9:43:42 AM UTC-4, Kai Heckel
>> wrote:
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>>> Any Ideas?
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>>> Thanks,
>>> Kai
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>
> Thanks for your suggestions so far!
>
> I am processing on a linux server. So it shouldn't be anything Windows related.

Subject: Re: Random 'Unable to allocate memory' error
Posted by [Paul Van Delst\[1\]](#) on Wed, 14 Oct 2015 14:59:30 GMT
[View Forum Message](#) <> [Reply to Message](#)

Hello,

On 10/14/15 07:15, Haje Korth wrote:

> Hm, I thought you could indeed be suffering from memory
> fragmentation,
> but I thought this is only a windows issue. Since you are on linux, you
> should be automatically using 64 bit as the 32 bit version is no longer
> included in recent releases. In this case, I really don't know what
> causes your issue. I would check with support.

This is probably unrelated, but I experienced a similar issue recently.

In my case it was because I was attempting to do some IDL processing on
a frontend (or login) node of the supacomputer I was using. That is
(somehow) restricted by the system setup. I'm guessing everything was
working fine until I passed some memory usage limit or there were too
many other folks on the login node - I was not doing anything too
complicated or big.

When I started an interactive job on a compute node the 'Unable to
allocate memory' error went away. (Aside: The sysdocs said to run IDL, a
whole node should be taken! I guess memory management is an issue in
general with IDL.)

So, if the OP is using IDL on a shared system (s/he did say "server" so...other users?) maybe the other users are requesting enough resources to make the OP's script run out of available memory in a seemingly random way?

(I'm waving my hands about in the air trying to make the scenario seem reasonable :o)

cheers,

paulv

>
> On Wednesday, October 14, 2015 at 3:44:35 AM UTC-4, Kai Heckel wrote:
>> Am Dienstag, 13. Oktober 2015 20:11:47 UTC+2 schrieb Haje Korth:
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>> Thanks for your suggestions so far!
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>> I am processing on a linux server. So it shouldn't be anything Windows related.
>

Subject: Re: Random 'Unable to allocate memory' error
Posted by [Kai Heckel](#) on Thu, 15 Oct 2015 11:01:46 GMT
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Am Mittwoch, 14. Oktober 2015 16:59:35 UTC+2 schrieb Paul van Delst:
> Hello,
>
> On 10/14/15 07:15, Haje Korth wrote:

>> Hm, I thought you could indeed be suffering from memory
>> fragmentation,
>> but I thought this is only a windows issue. Since you are on linux, you
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>> included in recent releases. In this case, I really don't know what
>> causes your issue. I would check with support.

>

> This is probably unrelated, but I experienced a similar issue recently.

>

> In my case it was because I was attempting to do some IDL processing on
> a frontend (or login) node of the supercomputer I was using. That is
> (somehow) restricted by the system setup. I'm guessing everything was
> working fine until I passed some memory usage limit or there were too
> many other folks on the login node - I was not doing anything too
> complicated or big.

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> allocate memory' error went away. (Aside: The sysdocs said to run IDL, a
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> general with IDL.)

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> to make the OP's script run out of available memory in a seemingly
> random way?

>

> (I'm waving my hands about in the air trying to make the scenario seem
> reasonable :o)

>

> cheers,

>

> paulv

>

>

>>

>> On Wednesday, October 14, 2015 at 3:44:35 AM UTC-4, Kai Heckel wrote:

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>>>> > sometime not. I can say that is not file specific.

>>>> >

>>>> > Any Ideas?
>>>> >
>>>> > Thanks,
>>>> > Kai
>>>
>>>
>>> Thanks for your suggestions so far!
>>>
>>> I am processing on a linux server. So it shouldn't be anything Windows related.
>>

Good idea Paul but I am the only one processing on the server.... However, 32 GB of RAM should be enough for me and others to process.

Here is another idea I have:

In all processes large arrays are created. Not only one but multiple arrays. Is possible that these variables need to be deleted after they were used in each file loop?

BTW: Is it possible to delete all variable except for one?

Subject: Re: Random 'Unable to allocate memory' error
Posted by [Phillip Bitzer](#) on Thu, 15 Oct 2015 13:57:20 GMT
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On Thursday, October 15, 2015 at 6:01:50 AM UTC-5, Kai Heckel wrote:

>
> Here is another idea I have:
> In all processes large arrays are created. Not only one but multiple arrays. Is possible that these variables need to be deleted after they were used in each file loop?
>

With memory allocation errors, *anything* is possible :-)

To help answer this, you might try keeping track of the memory usage each step in the loop. By using MEMORY(), at least you would then have an idea if you were hitting the server limit....

Subject: Re: Random 'Unable to allocate memory' error
Posted by [Paul Van Delst\[1\]](#) on Thu, 15 Oct 2015 14:59:56 GMT
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On 10/15/15 09:57, Phillip Bitzer wrote:

> On Thursday, October 15, 2015 at 6:01:50 AM UTC-5, Kai Heckel wrote:
>>
>> Here is another idea I have: In all processes large arrays are
>> created. Not only one but multiple arrays. Is possible that these

>> variables need to be deleted after they were used in each file
>> loop?
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> With memory allocation errors, *anything* is possible :-)
>
> To help answer this, you might try keeping track of the memory usage
> each step in the loop. By using MEMORY(), at least you would then
> have an idea if you were hitting the server limit....

+1

If you don't measure it, you can't manage it.

Subject: Re: Random 'Unable to allocate memory' error
Posted by [Kai Heckel](#) on Mon, 19 Oct 2015 12:46:06 GMT
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Am Donnerstag, 15. Oktober 2015 15:57:28 UTC+2 schrieb Phillip Bitzer:

> On Thursday, October 15, 2015 at 6:01:50 AM UTC-5, Kai Heckel wrote:

>>
>> Here is another idea I have:
>> In all processes large arrays are created. Not only one but multiple arrays. Is possible that these variables need to be deleted after they were used in each file loop?
>>
>
> With memory allocation errors, *anything* is possible :-)
>
> To help answer this, you might try keeping track of the memory usage each step in the loop. By using MEMORY(), at least you would then have an idea if you were hitting the server limit....

Thanks, I will test it. But what do the values of MEMORY() mean?

Subject: Re: Random 'Unable to allocate memory' error
Posted by [Yngvar Larsen](#) on Mon, 19 Oct 2015 13:01:06 GMT
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On Monday, 19 October 2015 14:46:10 UTC+2, Kai Heckel wrote:

> But what do the values of MEMORY() mean?

<http://www.exelisvis.com/docs/MEMORY.html>

--
Yngvar

Subject: Re: Random 'Unable to allocate memory' error
Posted by [Chip Helms](#) on Thu, 22 Oct 2015 18:20:02 GMT
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On Tuesday, October 13, 2015 at 10:31:24 AM UTC-4, Kai Heckel wrote:

> One more thing I should mention.

> I am processing parallel (2 processes). Those two should not exceed the memory limit of the server.

Are you using the IDL-IDL bridge for this? If this is the case, this thread might help you:

<https://groups.google.com/d/topic/comp.lang.idl-pvwave/J2QMUUvmPLY/discussion>

Supposedly, the issue was fixed in 8.3 (of course, I'm still using 8.2.3 due to budget issues :)). I'm not entirely sure how I solved the issue (or if I did at all). I can try digging a bit more if this is, in fact, related to your issue.

Cheers,
Chip

Subject: Re: Random 'Unable to allocate memory' error
Posted by [Kai Heckel](#) on Fri, 23 Oct 2015 06:55:16 GMT
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Am Donnerstag, 22. Oktober 2015 20:20:05 UTC+2 schrieb Chip Helms:

> On Tuesday, October 13, 2015 at 10:31:24 AM UTC-4, Kai Heckel wrote:

>> One more thing I should mention.

>> I am processing parallel (2 processes). Those two should not exceed the memory limit of the server.

>

> Are you using the IDL-IDL bridge for this? If this is the case, this thread might help you:

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> Supposedly, the issue was fixed in 8.3 (of course, I'm still using 8.2.3 due to budget issues :)).

I'm not entirely sure how I solved the issue (or if I did at all). I can try digging a bit more if this is, in fact, related to your issue.

>

> Cheers,

> Chip

Hey Chip,

thanks for the suggestion, but I am using 8.4 and this has already been fixed I guess. Anyways I think that it could be CPU related because on the 1st server 2 processes run properly (16 cores, 32GB RAM). On the 2nd server only one process can be run (8 cores, 32GB RAM). So I am only running 3 processes now, which is fine for me.

However, thank you all for your suggestions!

Cheers,
Kai
