Subject: Re: Strange memory problem
Posted by Mark D. Williams on Tue, 21 Dec 1999 08:00:00 GMT
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"R. Kyle Justice" wrote:
>
> When I do the following:
>
> temp=bytarr(1000,1000,25)
> temp(*)=10
>
> my computer (a Sparc20 with 128MB of *available* ram) grinds
> to a halt. Actually it starts using swap. Don't tell me
> PV-Wave is making 5 or 6 copies of the array just to do this
> simple process!
>
> Has anyone else seen this curious behavior on PV-Wave? IDL? I have
> verified it on a PC, and using different versions of PV-Wave(6.1,7.0).
>
> I have played around with the z-value and 25 (i.e. 25MB) is roughly
> the cutoff for going into swap for a 128MB system.
>
> Kyle

I don't have access to a Sparc, but I tried this on PV-WAVE 7.0 on
both Windows NT 4.0 and RedHat Linux 6.0 on a system with 256 Mb of
physical RAM and didn't experience any problem: i.e., no swapping,
returned to the prompt within 3-4 seconds.

FWIW, if you want to save time and memory, a faster way to do the above
is as follows:

WAVE> temp = BYTARR(1000,1000,25, /NoZero) + 10B

Note, was it your intent to end up with temp being an INTARR? By
assigning
10 instead of 10B, that is what you're ending up with.

Regards,
Mark Williams
Resource Engineering, Inc.

Subject: Re: Strange memory problem
Posted by Liam Gumley on Wed, 22 Dec 1999 08:00:00 GMT
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"Mark D. Williams" wrote:

> FWIW, if you want to save time and memory, a faster way to do the above
> is as follows:
>
> WAVE> temp = BYTARR(1000,1000,25, /NoZero) + 10B

I get the fastest response (in IDL) with

temp = replicate(10B, 1000, 1000, 25)

Cheers,
Liam.

--
Liam E. Gumley
Space Science and Engineering Center, UW-Madison
http://cimss.ssec.wisc.edu/~gumley

Subject: Re: Strange memory problem
Posted by wbiagiot on Wed, 22 Dec 1999 08:00:00 GMT
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In article <38602B16.5EDA39B@resource-eng.com>,
  "Mark D. Williams" <markw-xxxnospamxxx@resource-eng.com> wrote:

>
> FWIW, if you want to save time and memory, a faster way to do the
above
> is as follows:
>
> WAVE> temp = BYTARR(1000,1000,25, /NoZero) + 10B
>

Mark,

FWIW, I don't often comment on programming examples posted here even
though I usually try them out. I was floored by the benchmark
comparisons that I got when checking out your idea. I have a Win95
Pentium 200 32Mb machine w/ IDL 5.2.1. I didn't run an exact time count
but I estimate your idea being ~30 times faster (~4 seconds vs. over a
minute). Also, and perhaps more importantly, IDL consumed only 25-26
Mbytes operating on your code and 125-126 Mbytes on the original
(obviously churning like crazy)!!!

I regularly work with large arrays and need to go back into my
application to see if I can utilize this.

Thanks for an eye-opener!

Bill B.

--
"They don't think it be like it is, but it do."

Oscar Gamble, NY Yankees

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