Subject: Processing getting slower and slower?
Posted by Zoltan Bartalis on Mon, 06 Mar 2006 16:52:12 GMT
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Hello all

[Regular reader, first time poster]

I am processing satellite data with IDL, involving reading in data,
processing it, storing it in several buffer arrays and writing (appending)
it to lots of binary files (about one million) as soon as any of the buffers
is full. Without going into more details, a more general question: has
anyone encountered that while going through several processing cycles
involving intensive file opening, writing and closing, the processing gets
slower and slower for each cycle, although the operations in each cycle are
more or less the same? I am declaring all the buffer arrays and other needed
variables _before_ looping through the read-in of the input data files, so I
would expect no change in the memory usage from cycle to cycle. Is this an
IDL issue or a platform one? Running under Windows XP.

Thanks in advance,
/Zoltan, Vienna

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email: zb @ ipf . tuwien . ac . at   Tel (++43 1) 58801 12240
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Subject: Re: Processing getting slower and slower?
Posted by Nigel Wade on Wed, 08 Mar 2006 14:49:30 GMT
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Zoltan Bartalis wrote:

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Is there any change in memory usage as the loops progress?

It might be a filesystem issue. As you continually open/append/close the files
they grow in size, and each append takes longer as it has to find the end of a
progressively longer file. I think this will be made much worse by the fact you
are writing many files simultaneously, so each file will become very badly
fragmented, and fragmented files take much longer to locate to EOF.

--
Nigel Wade, System Administrator, Space Plasma Physics Group,
        University of Leicester, Leicester, LE1 7RH, UK
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Phone :   +44 (0)116 2523548, Fax : +44 (0)116 2523555

Subject: Re: Processing getting slower and slower?
Posted by Zoltan Bartalis on Thu, 09 Mar 2006 16:59:15 GMT

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Thanks David, Lajos and Nigel for your answers. The explanation is probably
a combination of the issues you mentioned. Unfortunately due to time
pressure I couldn't investigate the problem further - I simply adopted a
more "unorthodox" solution, I now gave up processing globally and started
doing it region-wise. That means more manual interference with the
processing, and the total processing time is more or less unchanged, but at
least there are now fewer files to handle simultaneously, and as soon as a
batch is ready, I can go on working with it.

Thanks for your help again,
-Zoltan-

"Nigel Wade" <nmw@ion.le.ac.uk> wrote in message
news:dumqscgsh1@south.jnrs.ja.net...
> Zoltan Bartalis wrote:
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> Nigel Wade, System Administrator, Space Plasma Physics Group,
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