Subject: Re: Minor IDL code changes cause large slowdowns elsewhere in code
Posted by Haje Korth on Wed, 10 Oct 2007 21:04:52 GMT
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Any difference if you try the comparison with integer numbers assigned to
the tree types? Haje

"cedric" <cedric@barrodale.com> wrote in message
news:1192042534.817071.151580@19g2000hsx.googlegroups.com...
> I have observed a problem in an IDL timber supply model that arose
> after having made some changes to use tables instead of computations
> in order to free up some memory space and to circumvent some involved
> computations. Following these changes, there was a general four-fold
> increase in execution times, even for those sections of code that were
> unaffected by the change. After doing some analysis, I found that
> this was at least partly due to large increases in times for
> operations involving manipulating string fields in a vector of
> structures (with, say, 50,000 elements).
>
> For example, we have a string vector of the form
> (*(*unit[i]).layer).species, where "unit" is a pointer to a vector of
> large (30 MByte) "unit" structures with multiple tags, one of which is
> a pointer to a vector of "layer" structures, and where each "layer"
> structure has "species" (a string) as one of its tags. Then commands
> of the form
>
> z = uniq ((*(*unit[i]).layer).species, sort
> ((*(*unit[i]).layer).species)) , or
> subs = where ((*(*unit[i]).layer).species eq 'PINE')
>
> take much longer than with the original version (with the same
> elements in the vector).
>
> I have some work-arounds to recover some of the speed, but the
> question is what is really going on here, where minor changes in the
> code can cause large changes in the timing behavior of procedures that
> are outside the code that was changed? Is there some memory
> fragmentation issue? If so, how can this be overcome? (BTW, the
> memory footprint of the code with tables is actually 40% smaller than
> the original!) If anyone has any experience with something similar, I
> would really appreciate their insights here.
>