Subject: 64-bit IDL and multi-threading
Posted by greg.addr on Fri, 19 Oct 2007 14:33:04 GMT
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I'm considering trying to set up a 64-bit system to get past the 1 GB limit of windows, and wondering at the same time how far it's worth going with a multi-processor system. I know some of the longer processing codes I have could be split into parallel tasks, but I've never tried that - I don't know even if it's possible in IDL beyond the built-in multi-threaded routines. I'd be glad of any advice...

Greg

Subject: Re: 64-bit IDL and multi-threading
Posted by rtowler on Fri, 19 Oct 2007 15:26:17 GMT
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On Oct 19, 2:33 pm, wrote:

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> limit of windows, and wondering at the same time how far it's worth
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> processing codes I have could be split into parallel tasks, but I've
> never tried that - I don't know even if it's possible in IDL beyond
> the built-in multi-threaded routines. I'd be glad of any advice...

Not to nitpick, but the limit in 32bit winXP/Vista is 4GB less the MMIO region from ~3-4GB. In practical terms it's around 3-3.2GB. But that's not your question :)

If you're buying a new machine, you'd actually be hard pressed *not* to buy what most consider a multi-processor system. Multicore is where it's at these days. (Intel will stop selling single core chips early next year.) Will you benefit much in IDL? Hard to say. Theoretically you could use the IDLtoIDL bridge and start multiple instances of IDL and run those parallel tasks. How much of a performance gain you'll realize would depend on a number of factors but since you basically get that second core for free there's no reason not to.

So go crazy and get that dual or quad core system.

-Rick

Subject: Re: 64-bit IDL and multi-threading

Posted by edkase on Fri, 19 Oct 2007 17:37:57 GMT
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On Oct 19, 8:33 am, greg.a...@googlemail.com wrote:
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> Greg

FastDL products significantly decrease the time required to get answers to complex problems by allowing IDL users to quickly re-purpose multiple IDL applications to run in parallel. FastDL offers two independent components that address the varying computational needs of parallel data analysis and visualization applications, TaskDL and mpiDL. TaskDL is designed to be used in applications where parallel processing computations can be executed independent of one another, such as movie frame rendering and Monte Carlo simulations. Using TaskDL, IDL applications can be re-purposed in minutes to run in parallel on a Linux cluster. mpiDL is an even more powerful option for computations that require different segments processing in parallel to communicate with each other, such as distributed data set analysis and finite element analysis. mpiDL is the ideal solution for scientists and developers who are familiar with parallel computing. It is a unique, off-the-shelf product that offers true inter-process communication.

For more information about FastDL, please visit http://www.txcorp.com/products/FastDL/

Sincerely,
Ed Kase
Director of Marketing and Business Development
Tech-X Corporation

Subject: Re: 64-bit IDL and multi-threading
Posted by greg.addr on Mon, 22 Oct 2007 16:32:59 GMT
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Thanks, Rick. I'll take a look at this IDLtoIDL bridge. The 1 GB limit I meant is this contiguous memory problem (in XP, at least), that you can't allocate a larger array because the memory is already fragmented by other system programs. I've tried the windows start-up file modifications mentioned elsewhere in this newsgroup, but without

success - the system just seizes up.

Greg