Subject: Re: IDL and Dual Processor PC's
Posted by Bruce L. Gotwols on Thu, 03 Jun 1999 07:00:00 GMT
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I am running dual processors under Linux kernel versions 2.0.36 (patched to support symmetric multi processing), as well as the new Linux kernel 2.2 which supports dual processors without a patch. In both cases I have been very happy with the performance. Note however, that to obtain the benefit of dual processing you have to run two independent copies of IDL. (Or IDL and a C++ routine for example.) When I run a single copy of time_test2 (using the /nofileio keyword) it takes about 7 seconds to complete. Running a second copy of time_test2 increases the time to complete to 8 - 10 sec. I have not yet figured out why sometimes the performance hit is only 1 additional seconds, and other times it is 3 seconds. Probably something to do with caching. I am currently searching for a way to tell IDL which processor to use and any other tuning parameters which would make it more consistent.

Even in the worst case the second processor is doing us a lot of good. In practice we won't be using two copies of IDL, but rather a C rouutine that pulls high speed data from a 100 base-T network socket, stores it on disk, and simulatenously writes some of data into shared memory where IDL can grab it and do Quick-Look proicessing and display on it. So yes I'm very happy with dual processing in our work. (But not at all happy with RSI's support of Linux...see my related post in this newsgroup.)

Cheers, Bruce Gotwols

Bruce L. Gotwols
Johns Hopkins University, Applied Physics Lab., Laurel MD 20723
Internet: gotwols@tesla.jhuapl.edu
Phone: 240-228-4543 FAX: 240-228-5548
Space Oceanography Group Home Page -- http://fermi.jhuapl.edu

Tanya Lancaster wrote:
>
> We are looking into purchasing a dual processor pc. I was wondering if
> there would be a notable increase in speed for running IDL programs. Right
> now we handle large medical image data sets and operations on the data sets
> take up to several hours on a PII -400, 256 mb memory.
>
> -Tanya Lancaster

Subject: Re: IDL and Dual Processor PC's
Posted by mgs on Thu, 03 Jun 1999 07:00:00 GMT
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In article <7j62f0krm1@pale-rider.INS.CWRU.Edu>, "Tanya Lancaster"
<lancaste@morph.ebme.cwru.edu> wrote:

> We are looking into purchasing a dual processor pc. I was wondering if
> there would be a notable increase in speed for running IDL programs.

Nope. IDL is single-threaded, implying it cannot divvy it's processing up
among multiple processors. Once you start IDL it stays on the same CPU.
You can try some interesting things like spawning addition copies of IDL
onto other processors. I tried that about 7 years ago on a Sun MP/670 with
4 processors. Not worth the effort was my conclusion.

> Right
> now we handle large medical image data sets and operations on the data sets
> take up to several hours on a PII -400, 256 mb memory.

If you're running other tasks on the same system the additional CPU would
be helpful, but not for IDL alone.

I would love to hear that I'm wrong about this.

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Mike Schienle Interactive Visuals, Inc.
mgs@ivsoftware.com Remote Sensing and Image Processing
http://www.ivsoftware.com/ Analysis and Application Development