Subject: Re: IDL Matrix Multiply and Dual-Core CPUs
Posted by Bringfried Stecklum on Fri, 09 May 2008 16:09:57 GMT
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s.haenger@gmail.com wrote:
> Hi,
>
> I have a Problem with IDL 7.0
> We have to multiply large matrices. With some matrix sizes, the CPU
> usage is 100% but for most of the matrices it is 50%. (I'm runnning it
> on a Intel T7250 (Dual Core, 2GHz, 2MB L2 Cache))
>
>
> The CPU System Variable is configured like this:
> IDL> print, !CPU
> { 0 0 2 2
> 100000 0}
>
>
> Now we do this:
> matA = randomn(42, 2000, 2200)
> matB = randomn(43, 2020, 2000)
> matIdl = matA##matB
>
> So now i've got a CPU usage of 100%
>
> but with this:
> matA = randomn(42, 2500, 2500)
> matB = randomn(43, 2520, 2500)
> matIdl = matA##matB
>
> the cpu usage is around 50%-60%
>
> I've already tried to increase the TPOOL_NTHREADS and to decrease the
> TPOOL_MIN_ELTS! It didn't help!
>
> We throught it could be because the size (2500*2520=) produces an
> overflow and the matrix size gets too small or negative, so IDL uses
> just 1 thread to compute.
>
> Does anybody know how I can fix that problem?
>
>
> Thanks a lot
> Samuel
If the physical memory of your machine is not big enough to hold all arrays
the system kernel starts to swap which eats CPU.

Regards,

B. Stecklum