Subject: Re: Help, no improvement in FFT speed on a multiprocessor system
Posted by Marco on Mon, 07 Sep 2009 19:58:27 GMT
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The arrays are Nx8192 on a side with N a power of 2.

I increased N until the speed dropped of a cliff. Presumably cache/memory thrashing.

"Kenneth P. Bowman" <k-bowman@null.edu> wrote in message news:k-bowman-5D1FE7.08403607092009@news.tamu.edu...
> In article <4aa34391$1@darkstar>, "Marco" <null@null.net> wrote:
>
>> I'm running IDL 7.1 on a Linux 2.6. This is an HP quad processor with
>> each
>> processors having 6 cores for 24 cores total.
>>
>> Doing large 2-D FFTs (>8Kx8K) I get no benefit from the extra
>> processors.
>> I can vary the number used in IDL from 24 down to 1, and see that the
>> number actually of processors actually showing a load is the correct
>> number,
>> but from 4 to 24 threads, the speed is the same and no faster than
>> Matlab,
>> which uses only a single processor out of the 24.
>>
>> I've tried varied IDL_CPU_TPOOL_NTHREADS and IDL_CPU_TPOOL_MIN_ELTS, but
>> have not been able to improve the results.
>>
>> Any suggestions?
>>
>> Thanks in advance,
>
> Do your array dimensions have small prime factors (2, 3, 4, or 5)?
>
> Ken Bowman