OMPM2001 Result

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HP

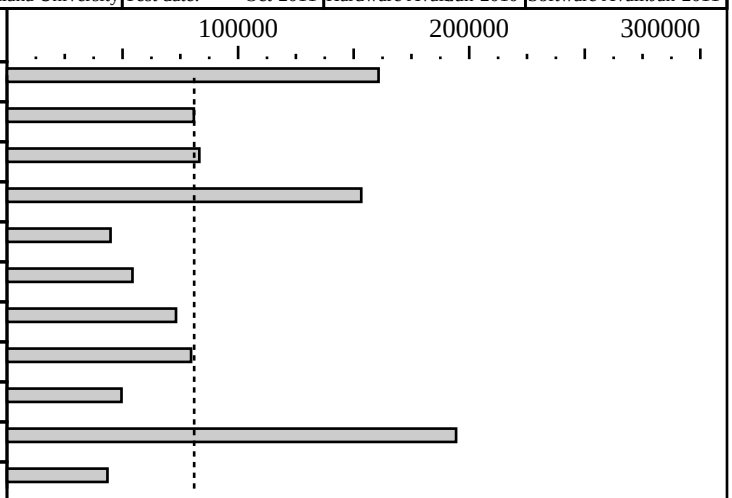
HP Proliant DL580 G7 Server Series, Intel Xeon L7555, 1.87 GHz

SPECompMpeak2001 = --

SPECompMbase2001 = 80989

SPEC license #: HPG3440A | Tested by: Indiana University | Test site: Indiana University | Test date: Oct-2011 | Hardware Avail: Jun-2010 | Software Avail: Jan-2011

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	37.3	160774		
312.swim_m	6000	74.2	80847		
314.mgrid_m	7300	87.7	83222		
316.applu_m	4000	26.1	153288		
318.galgel_m	5100	114	44802		
320.equake_m	2600	47.9	54295		
324.apsi_m	3400	46.5	73134		
326.gafort_m	8700	109	79651		
328.fma3d_m	4600	92.8	49543		
330.art_m	6400	32.9	194318		
332.ammp_m	7000	161	43469		



Hardware

CPU:	Intel Xeon L7555
CPU MHz:	1866
FPU:	Integrated
CPU(s) enabled:	32 cores, 4 chips, 8 cores/chip (HT on)
CPU(s) orderable:	1-4 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
L3 Cache:	24 MB I+D on chip per chip
Other Cache:	None
Memory:	512 GB (64 x 8 GB 2Rx4 PC3-10600R, ECC, running at 1066 MHz and CL9)
Disk Subsystem:	Two 500 GB 7200 RPM 2.5" SAS hard drives, in RAID 1 mirror
Other Hardware:	None

Software

OpenMP Threads:	32
Parallel:	OpenMP
Operating System:	RHEL6.0 (x86_64) 2.6.32-71.14.1.el6 Kernel 2.6.32-71.14.1.el6
Compiler:	Intel(R) C/C++ Composer XE 2011 for Linux, version 12.0.2, Build 20110112 Intel(R) Fortran Composer XE 2011 for Linux, version 12.0.2, Build 20110112
File System:	NFSv3 (IBM N5500 NAS) over Gb ethernet
System State:	Multi-user, run level 3

Notes/Tuning Information

```
ulimit -s unlimited
    Removes limits on the maximum size of the automatically-
    extended stack region of the current process and each
    process it creates.
Compiler flags for base level optimization
    COPTIMIZE : -O3 -xSSE4.1 -no-prec-div -openmp -ipo
    FOPTIMIZE : -O3 -xSSE4.1 -no-prec-div -openmp -ipo
    F77OPTIMIZE : -O3 -xSSE4.1 -no-prec-div -openmp -ipo
Environment:
    KMP_AFFINITY=compact,1
     controls the binding of OpenMP threads to the physical processing units
    KMP_SCHEDULE=static,balanced
     used to fine tune the load balancing of parallel loops that are
     statically scheduled under OpenMP with no chunk size specification
    KMP_BLOCKTIME=infinite
     Sets the time, in milliseconds, that a thread should wait,
     after completing the execution of a parallel region, before sleeping.
    KMP_LIBRARY=throughput
     Selects the OpenMP run-time library
    KMP_STACKSIZE=31m
     Sets the number of bytes to allocate for each parallel thread to use as
     to use as its provate stack
    OMP_NESTED=TRUE
```

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Notes/Tuning Information (Continued)

```
     Enables (TRUE) or  disables  (FALSE)  nested  parallelism.
    OMP_DYNAMIC=FALSE
     Enables (true) or disables (false) the dynamic adjustment of the number of threads.
    OMP_NUM_THREADS=32
     Sets  the maximum number of threads to use for OpenMP* parallel
     regions if no other value is specified in the  program  itself.
Portability Flags:
    318.galgel_m=default=default=default:
     FFLAGS=-fixed -extend-source 132
BIOS settings notes:
     Intel Hyper-Threading Technology (SMT): Enabled
     Intel Turbo Boost Technology (Turbo)  : Enabled (Max 2.533GHz)
For compiler/openmp flags description please refer:
Intel-ic12.0-intel64-linux-flags-file.html
```