OMPL2001 Result

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

SPECompLpeak2001 = --
SPECompLbase2001 = 493152

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Benchmark | Reference Time | Base Runtime | Base Ratio | Peak Runtime | Peak Ratio
---|---|---|---|---|---
311.wupwise_l | 9200 | 203 | 723729 | | |
313.swim_l | 12500 | 602 | 331955 | | |
315.mgrid_l | 13500 | 518 | 416695 | | |
317.applu_l | 13500 | 562 | 384230 | | |
321.equate_l | 13000 | 575 | 361456 | | |
325.apsi_l | 10500 | 271 | 620871 | | |
327.gafort_l | 11000 | 391 | 450003 | | |
329.fma3d_l | 23500 | 1166 | 322462 | | |
331.art_l | 25000 | 290 | 1377258 | | |

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**Hardware**

- CPU: Intel Xeon L7555
- CPU MHz: 1866
- FPU: Integrated
- CPU(s) enabled: 32 cores, 4 chips, 8 cores/chip (HT off)
- 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
- Disk Subsystem: Two 500 GB 7200 RPM 2.5" SAS hard drives, in RAID 1 mirror
- Memory: 512 GB (64 x 8 GB 2Rx4 PC3-10600R, ECC, running at 1066 MHz and CL9)

**Software**

- OpenMP Threads: 32
- Parallel: OpenMP
- Operating System: Red Hat Enterprise Linux 6.0 (x86_64) 2.6.32-71.14.1.el6
- Compiler: Intel(R) C/C++ 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

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**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 -xSSE4.2 -xHost -no-prec-div -openmp -ipo
FOPTIMIZE : -O3 -xSSE4.2 -xHost -no-prec-div -openmp -ipo
F77OPTIMIZE : -O3 -xSSE4.2 -xHost -no-prec-div -openmp -ipo

Environment:
KMP_AFFINITY=disabled
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 private stack
OMP_NESTED=TRUE
Enables (TRUE) or disables (FALSE) nested parallelism.
OMP_DYNAMIC=FALSE
Enables (true) or disables (false) the dynamic adjustment of the number of threads.
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Notes/Tuning Information (Continued)

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.

BIOS settings notes:
Intel Hyper-Threading Technology (SMT): Disabled
Intel Turbo Boost Technology (Turbo) : Enabled (Max 2.533GHz)

For compiler/openmp flags description please refer:
Intel-ic12.0-intel64-linux-flags-file.html