OMPM2001 Result

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

SPECompMpeak2001 = --
SPECompMbase2001 = 78307

Benchmark Reference Time Base Runtime Peak Runtime Peak Ratio
310.wupwise_m 6000 46.7 128583
312.swim_m 6000 84.1 71337
314.mgrid_m 7300 96.9 75332
316.applu_m 4000 29.9 133967
318.galgel_m 5100 115 44387
320.equake_m 2600 52.3 71337
324.apsi_m 3400 44.7 76128
326.gafort_m 8700 98.2 88571
328.fma3d_m 4600 88.3 52108
330.art_m 6400 31.1 205935
332.ammp_m 7000 152 45953

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
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

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++ Compiler XE 2011 for Linux, version 12.0.2, Build 20110112
Operating System: 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 -xSSE4.2 -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
its private stack
OMP_NESTED=TRUE
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): 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