OMPM2001 Result

SGI Altix 4700 Bandwidth System (1600MHz 24M L3, DC Itanium2 9050)

SPECompMpeak2001 = 67356
SPECompMbase2001 = 59891

Benchmark | Reference Time | Base Runtime | Base Ratio | Peak Runtime | Peak Ratio
--- | --- | --- | --- | --- | ---
310.wupwise_m | 6000 | 65.8 | 91220 | 65.8 | 91220
312.swim_m | 6000 | 35.5 | 168924 | 35.5 | 168924
314.mgrid_m | 7300 | 97.2 | 75100 | 97.2 | 75100
316.applu_m | 4000 | 39.1 | 102188 | 39.1 | 102188
318.galgel_m | 5100 | 350 | 14572 | 271 | 18835
320.equake_m | 2600 | 68.3 | 38054 | 36.6 | 70947
324.apsi_m | 3400 | 48.0 | 70848 | 47.2 | 71983
326.gafort_m | 8700 | 189 | 45912 | 161 | 54022
328.fma3d_m | 4600 | 116 | 39520 | 92.1 | 49941
330.art_m | 6400 | 32.2 | 198842 | 32.2 | 198842
332.ammp_m | 7000 | 330 | 21217 | 330 | 21217

Baseline optimization flags:
C programs: -openmp -03 -IPF_fp_relaxed -ipo -ansi_alias -auto_ilp32 (ONESTEP)
OpenMP runtime library libguide.a statically linked
Fortran programs: -openmp -03 -IPF_fp_relaxed -ipo (ONESTEP)
OpenMP runtime library libguide.a statically linked

Peak optimization flags:
310.wupwise_m: basepeak=true
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SPECompMpeak2001 = 67356
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Notes/Tuning Information (Continued)

312.swim_m: basepeak=true
314.mgrid_m: basepeak=true
316.applu_m: basepeak=true
318.galgel_m: -openmp -O3 -IPF_fp_relaxed -ipo (ONESTEP)
   OpenMP runtime library libguide.a statically linked
   OMP_NUM_THREADS=32
320.equake_m: -openmp -O3 -IPF_fp_relaxed -ipo -ansi_alias -auto_ilp32 (ONESTEP)
   OpenMP runtime library libguide.a statically linked
324.apsi_m: -openmp -O3 -IPF_fp_relaxed -ipo (ONESTEP)
   OpenMP runtime library libguide.a statically linked
326.gafort_m: -openmp -O3 -IPF_fp_relaxed -ipo (ONESTEP)
   OpenMP runtime library libguide.a statically linked
328.fma3d_m: -openmp -O3 -IPF_fp_relaxed -ipo (ONESTEP)
   OpenMP runtime library libguide.a statically linked
330.art_m: basepeak=true
332.ammmp_m: basepeak=true

Required alternate sources:
Add critical region around update of linked list in parallel loop.
Approved src.alt available as ompm-purdue1-20040324.tar.gz
Used for 330.art_m, base and peak.

Peak sources:
Available as ompl src.alt in SPEC OMP v3.0
Used for 320.equake_m, 324.apsi_m, 326.gafort_m, and 328.fma3d_m.

For all benchmarks threads were bound to cores using the following submit command:
dplace -x2 -cNTM1,0 $command,
where NTM1 is the number of threads minus 1.
This binds threads in order of creation, beginning with the master thread on core NTM1, the first slave thread on core NTM1-1, and so on.
The -x2 flag instructs dplace to skip placement of the lightweight
OpenMP monitor thread, which is created prior to the slave threads.

For a description of SGI's compiler flags, portability flags, and
system parameters used to generate this result, please refer to the
SGI-20061229-Linux-Intel19.0-IPF.txt file in the flags directory.