OMPM2001 Result

SGI

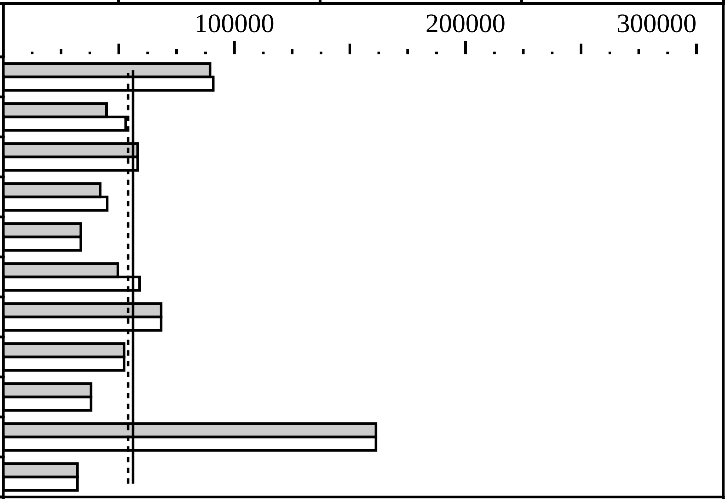
SGI Altix ICE 8400EX (AMD Opteron 6180 SE, 2.5GHz)

SPECompMpeak2001 = 56146

SPECompMbase2001 = 54002

SPEC license #: HPG0014	Tested by: SGI	Test site: SGI	Test date: Mar-2011	Hardware Avail: Mar-2011	Software Avail: Jan-2011

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	67.1	89485	66.1	90839
312.swim_m	6000	134	44692	113	53001
314.mgrid_m	7300	125	58188	125	58188
316.applu_m	4000	95.4	41926	89.0	44939
318.galgel_m	5100	152	33582	152	33582
320.equake_m	2600	52.4	49620	44.1	59006
324.apsi_m	3400	49.8	68282	49.8	68282
326.gafort_m	8700	166	52276	166	52276
328.fma3d_m	4600	121	37969	121	37969
330.art_m	6400	39.7	161267	39.7	161267
332.ammp_m	7000	218	32055	218	32055



Hardware

CPU:	AMD Opteron(tm) Processor 6180 SE
CPU MHz:	2500
FPU:	Integrated
CPU(s) enabled:	24 cores, 2 chips, 12 cores/chip
CPU(s) orderable:	1-2 chips
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	512 KB I+D on chip per core
L3 Cache:	12 MB I+D on chip per chip, 6MB shared / 6 cores
Other Cache:	None
Memory:	64 GB (16 x 4 GB, 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem:	16 TB RAID 5 32 x 500 GB SATA (Seagate Barracuda 7.2K)
Other Hardware:	None

Software

OpenMP Threads:	24
Parallel:	OpenMP
Operating System:	SUSE Linux Enterprise Server 11 SP1 (x86_64) Kernel 2.6.32.27-0.2-default
Compiler:	Open64 Compiler Suite: Version 4.2.4
File System:	NFSv3 IPoIB
System State:	Run Level 3 (Multi-User)

Notes/Tuning Information

```
Base and Peak User Environment (bash):
  export OMP_NUM_THREADS=24
  export OMP_DYNAMIC=FALSE
  export O64_OMP_SPIN_COUNT=1000000000
  export O64_OMP_SPIN_USER_LOCK=TRUE
  export O64_OMP_SET_AFFINITY=TRUE
  export O64_OMP_AFFINITY_MAP=" 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23"
  export OMP_SLAVE_STACK_SIZE=22M
  ulimit -s unlimited

For Compiler/OpenMP flags description please refer:
SGI-x86-open64-424-flags.html

Base tuning:
  C       : opencc -mp -Ofast -march=barcelona -mcmodel=medium
  Fortran : openf90 -mp -Ofast -march=barcelona -OPT:early_mp=on -mcmodel=medium
  ONESTEP=yes

Extra flags
  330.art_m: -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8

Portability flags:
```

Notes/Tuning Information (Continued)

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  318.galgel_m: -fixedform -col80

Peak tuning:
  ONESTEP=yes for all benchmarks

  310.wupwise_m: FOPTIMIZE= -mp -Ofast -msse3 -OPT:early_mp=on
   -LNO:prefetch_ahead=5:prefetch=3  -march=barcelona -mcmodel=medium
   -OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3
   -IPA:linear=on:plimit=50000:callee_limit=5000 -INLINE:aggressive=on -CG:load_exe=0
  312.swim_m: FOPTIMIZE= -mp -O3 -OPT:Ofast -m3dnow -mcmodel=medium -LNO:simd=0
  314.mgrid_m: basepeak=yes
  316.applu_m: FOPTIMIZE= -mp -Ofast -march=barcelona -OPT:early_mp=on -mcmodel=medium
  318.galgel_m: basepeak=yes
  320.equake_m: COPTIMIZE= -Ofast -mp -OPT:alias=disjoint -march=barcelona -mcmodel=medium
  324.apsi_m: basepeak=yes
  326.gafort_m: basepeak=yes
  328.fma3d_m: basepeak=yes
  330.art_m: basepeak=yes
  332.ammp_m: basepeak=yes

Alternate Sources :
  314.mgrid_m (base,peak): intel
  312.swim_m (peak): ompl.32
  316.applu_m (peak): ompl
  320.equake_m (peak): ompl

Additional notes for disk subsystem:
   The disk subsystem is mounted through NFS over IPoIB via 4x DDR
   InfiniBand network. There is no local disk on the system.
```