OMPM2001 Result

SGI

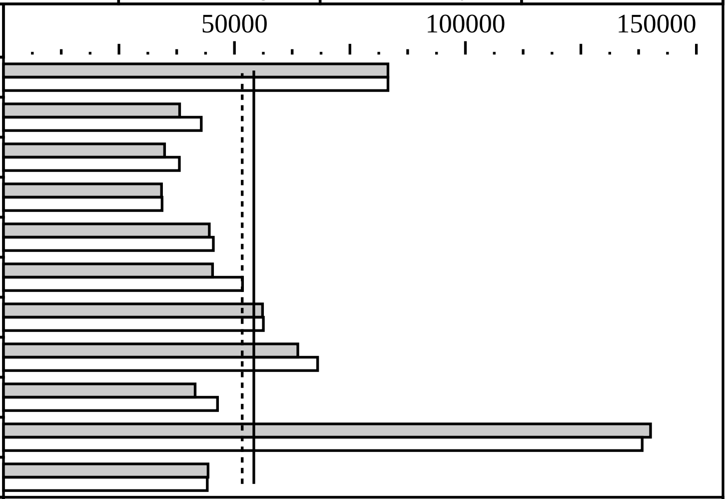
SGI Altix ICE 8400EX (Intel Xeon X5680, 3.33GHz)

SPECompMpeak2001 = 54196

SPECompMbase2001 = 51681

SPEC license #: HPG0014	Tested by: SGI	Test site: SGI	Test date: Aug-2010	Hardware Avail: May-2010	Software Avail: Jun-2010

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
310.wupwise_m	6000	72.1	83236	72.1	83239
312.swim_m	6000	157	38134	140	42817
314.mgrid_m	7300	209	34875	192	38078
316.applu_m	4000	117	34213	117	34330
318.galgel_m	5100	114	44557	112	45433
320.equake_m	2600	57.4	45260	50.2	51749
324.apsi_m	3400	60.6	56079	60.4	56263
326.gafort_m	8700	137	63721	128	68007
328.fma3d_m	4600	111	41486	99.3	46336
330.art_m	6400	45.7	140082	46.3	138274
332.ammp_m	7000	158	44286	159	44117



Hardware

CPU:	Intel(R) Xeon(R) Processor X5680
CPU MHz:	3333
FPU:	Integrated
CPU(s) enabled:	12 cores, 2 chips, 6 cores/chip, 2 threads/core
CPU(s) orderable:	1-2 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:	12 MB I+D on chip
Other Cache:	N/A
Memory:	24 GB (6x4 GB dual-rank DDR3-1333 CL9 RDIMMs)
Disk Subsystem:	8.8 TB RAID 5 60 x 146 GB SAS (Seagate Cheetah 15K.5)
Other Hardware:	None

Software

OpenMP Threads:	24
Parallel:	OpenMP
Operating System:	SUSE Linux Enterprise Server 11 SP1, Kernel 2.6.32.13-0.4-default
Compiler:	Intel C/C++ Compiler 11.1.059 for Linux Intel FORTRAN Compiler 11.1.059 for Linux Other: Intel Math Kernel Library 10.2.4
File System:	NFSv3 IPoIB
System State:	Multi-user, run level 3

Notes/Tuning Information

```
========================================================================
BIOS settings notes:
  Intel Hyper-Threading Technology (SMT): Enabled
  Intel Turbo Boost Technology (Turbo)  : Enabled (Max 3.6GHz)
  Patrol Scrub: Disabled

========================================================================
Extra Flags:
  318.galgel_m: -FI -132
  330.art_m: -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8

========================================================================
General Notes and Environment variables
  export KMP_LIBRARY=turnaround
  export KMP_STACKSIZE=31M
  export KMP_BLOCKTIME=infinite
  export OMP_DYNAMIC=FALSE
  ONESTEP=yes
  ulimit -s 64000

For compiler/openmp flags description please refer:
SGI-20100816-Linux-Intel11.1-intel64.html
```

Notes/Tuning Information (Continued)

```
Base optimization flags and environment variables:
==================================================================
Medium:
  OPTIMIZE  = -O3 -xSSE4.2 -ipo1 -openmp
  COPTIMIZE=-ansi-alias
  export KMP_AFFINITY=scatter,1

Peak optimization flags and environment variables:
==================================================================
Medium:
  OPTIMIZE  = -O3 -xSSE4.2 -ipo1 -openmp -rcd
  export KMP_AFFINITY=compact,1

Peak per-benchmark optimization flags and environment variables:
==================================================================
310.wupwise_m
  export KMP_AFFINITY=scatter,1

==================================================================
312.swim_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp -opt-streaming-stores always -align -rcd
  srcalt = ompl.32
  export OMP_NUM_THREADS=12

==================================================================
314.mgrid_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp -fno-alias -rcd
  export OMP_NUM_THREADS=12

==================================================================
316.applu_m
  export KMP_AFFINITY=scatter,1

==================================================================
318.galgel_m
  export OMP_NUM_THREADS=6
  RM_SOURCES=lapak.f90
  EXTRA_LIBS=-lmkl_intel_lp64 -lmkl_intel_thread -lmkl_core
  export KMP_AFFINITY=scatter,0
==================================================================
320.equake_m
  export OMP_NUM_THREADS=12

==================================================================
324.appsi_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp

==================================================================
326.gafort_m
  srcalt = ompl.32

==================================================================
328.fma3d_m
  FOPTIMIZE=-no-prec-sqrt -fp-model fast=2
  srcalt = ompl.32
```

Notes/Tuning Information (Continued)

```
=========================================================================
330.art_m
  COPTIMIZE=-ansi-alias

=========================================================================
332.ammp_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp
  export KMP_AFFINITY=scatter,1
```