OMPL2001 Result

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SGI

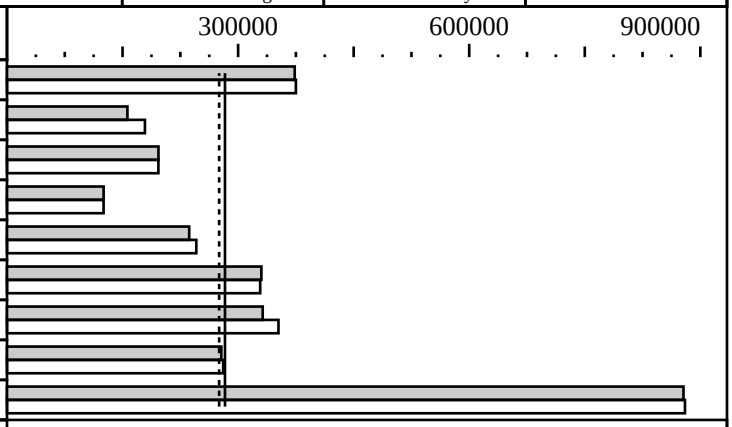
SGI Altix ICE 8400EX (Intel Xeon X5680, 3.33GHz)

SPECompLpeak2001 = 282953

SPECompLbase2001 = 275399

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
311.wupwise_l	9200	394	373482	393	375005
313.swim_l	12500	1280	156307	1117	179046
315.mgrid_l	13500	1099	196611	1099	196540
317.applu_l	13500	1723	125385	1723	125356
321.equake_l	13000	879	236504	846	245733
325.apsi_l	10500	509	330186	511	328636
327.gafort_l	11000	530	331919	499	352394
329.fma3d_l	23500	1352	278207	1340	280618
331.art_l	25000	456	878124	455	880059



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
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:
  331.art_l: -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
Base optimization flags and environment variables:
================================================================================
Large:
  OPTIMIZE  = -O3 -xSSE4.2 -ipo1 -openmp -mcmodel=medium -shared-intel
```

Notes/Tuning Information (Continued)

```
  COPTIMIZE  = -ansi-alias
  export KMP_AFFINITY=scatter,1

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

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

================================================================================
313.swim_m
  OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp -opt-streaming-stores always -align -rcd
           -mcmodel=medium -shared-intel
  export OMP_NUM_THREADS=12

================================================================================
315.mgrid_l
  export KMP_AFFINITY=scatter,1

================================================================================
317.applu_l
  OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp -rcd -mcmodel=medium -shared-intel
  export KMP_AFFINITY=scatter,1

================================================================================
321.equake_l
  export OMP_NUM_THREADS=12

================================================================================
325.appsi_l
  OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp

================================================================================
327.gafort_l
  OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp -rcd -mcmodel=medium -shared-intel
  export KMP_AFFINITY=scatter,0

================================================================================
329.fma3d_l
  FOPTIMIZE=-no-prec-sqrt -fp-model fast=2

================================================================================
331.art_l
  COPTIMIZE=-ansi-alias
```