OMPL2001 Result

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SGI

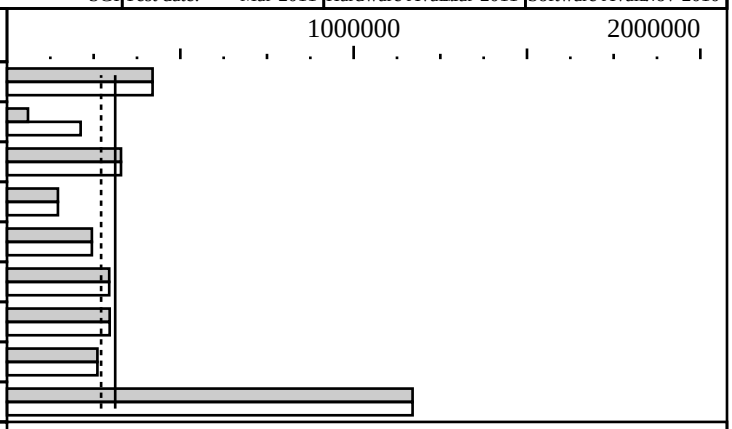
SGI Altix ICE 8400EX (AMD Opteron 6180 SE, 2.5GHz)

SPECompLpeak2001 = 312131

SPECompLbase2001 = 271499

SPEC license #: HPG0014 | Tested by: SGI | Test site: SGI | Test date: Mar-2011 | Hardware Avail: Mar-2011 | Software Avail: Nov-2010

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	351	419940	351	419940
313.swim_l	12500	3303	60546	942	212423
315.mgrid_l	13500	657	328853	657	328853
317.applu_l	13500	1470	146917	1470	146917
321.equake_l	13000	850	244830	850	244830
325.apsi_l	10500	570	294851	570	294851
327.gafort_l	11000	594	296200	594	296200
329.fma3d_l	23500	1442	260825	1442	260825
331.art_l	25000	342	1169947	342	1169947



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:	Red Hat Enterprise Linux Server release 6.0 (Santiago) Kernel 2.6.32-71.el6.x86_64
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 and Peak tuning:
  C       : opencc -mp -Ofast -march=barcelona -mcmodel=medium
  Fortran : openf90 -mp -Ofast -march=barcelona -OPT:early_mp=on -mcmodel=medium
  ONESTEP=yes

Peak tuning:
  basepeak=yes for all benchmarks except 311.swim_l

  313.swim_l   : FOPTIMIZE = -mp -O3 -OPT:Ofast -m3dnow -mcmodel=medium
                 -LNO:simd=0:prefetch_ahead=5:prefetch=3

Additional notes for disk subsystem:
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Notes/Tuning Information (Continued)

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

Additional notes for OS:
  Transparent Huge Page support is enabled on the system.
```