OMPL2001 Result

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SGI

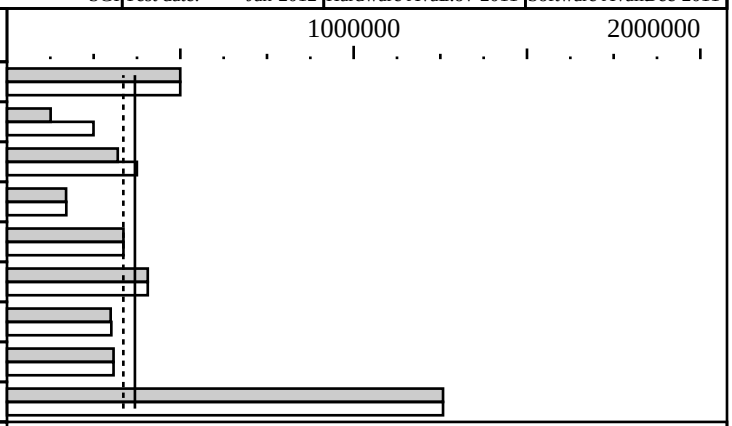
SGI Altix ICE 8400EX (AMD Opteron 6282 SE, 2.6GHz)

SPECompLpeak2001 = 369010

SPECompLbase2001 = 335615

SPEC license #: HPG0014 | Tested by: SGI | Test site: SGI | Test date: Jan-2012 | Hardware Avail: Nov-2011 | Software Avail: Dec-2011

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	295	499762	295	499762
313.swim_l	12500	1589	125864	801	249541
315.mgrid_l	13500	676	319512	577	374655
317.applu_l	13500	1267	170444	1263	171088
321.equake_l	13000	619	335929	619	335929
325.apsi_l	10500	414	406055	414	406055
327.gafort_l	11000	589	299057	585	300952
329.fma3d_l	23500	1223	307360	1223	307360
331.art_l	25000	318	1257788	318	1257788



Hardware

CPU:	AMD Opteron(tm) Processor 6282 SE
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	32 cores, 2 chips, 16 cores/chip
CPU(s) orderable:	1-2 chips
Primary Cache:	512 KB I on chip per chip, 64 KB I shared / 2 cores; 16 KB D on chip per core
Secondary Cache:	16 MB I+D on chip per chip, 2 MB I+D on chip per core
L3 Cache:	16 MB I+D on chip per chip, 8 MB shared / 8 cores
Other Cache:	None
Memory:	128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem:	16 TB RAID 5 32 x 500 GB SATA (Seagate Barracuda 7.2K)
Other Hardware:	None

Software

OpenMP Threads:	32
Parallel:	OpenMP
Operating System:	SUSE Linux Enterprise Server 11 SP1 (x86_64) Kernel 2.6.32.46-0.3-default #1 SMP
Compiler:	Open64 4.5.1
File System:	NFSv3 IPoIB
System State:	Run Level 3 (Multi-User)

Notes/Tuning Information

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AMD Turbo CORE technology up to 3.30 GHz

Base and Peak User Environment (bash):
  export OMP_NUM_THREADS=32
  export OMP_DYNAMIC=FALSE
  export O64_OMP_SPIN_COUNT=1000000000
  export O64_OMP_SPIN_USER_LOCK=TRUE
  export OMP_SLAVE_STACK=22M
  export O64_OMP_SET_AFFINITY=TRUE
 export O64_OMP_AFFINITY_MAP=0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31
  ulimit -s unlimited

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

Base tuning:
  C       : opencc  -mp -march=bdver1 -Ofast -mcmodel=medium
  Fortran : openf90 -mp -march=bdver1 -Ofast -OPT:early_mp=on -mcmodel=medium
  ONESTEP=yes

Peak tuning:
  ONESTEP=yes for all benchmarks.

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

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Notes/Tuning Information (Continued)

```
                    OMP_NUM_THREADS=16
                    O64_OMP_AFFINITY_MAP=1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31
 315.mgrid_l  : FOPTIMIZE = -mp -Ofast -march=barcelona -OPT:early_mp=on -mcmodel=medium
 317.applu_l  : FOPTIMIZE = -mp -Ofast -march=barcelona -OPT:early_mp=on -mcmodel=medium
 321.equake_l : basepeak=yes
 325.apsi_l   : basepeak=yes
 327.gafort_l : FOPTIMIZE = -mp -Ofast -march=barcelona -OPT:early_mp=on -mcmodel=medium
 329.fma3d_l  : basepeak=yes
 331.art_l    : basepeak=yes

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.
```