OMPL2001 Result

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SGI

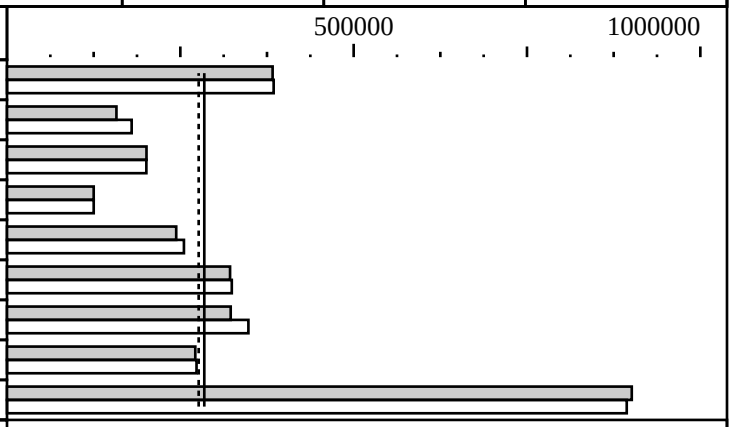
SGI Rackable C2112-4TY14 (Intel Xeon X5675, 3.06GHz)

SPECompLpeak2001 = 284560

SPECompLbase2001 = 276450

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	384	383094	383	384601
313.swim_l	12500	1267	157843	1112	179793
315.mgrid_l	13500	1074	201196	1075	201005
317.applu_l	13500	1727	125039	1727	125052
321.equake_l	13000	852	244061	815	255190
325.apsi_l	10500	522	321719	518	324202
327.gafort_l	11000	546	322635	505	348183
329.fma3d_l	23500	1384	271578	1375	273355
331.art_l	25000	444	901105	448	893851



Hardware

CPU:	Intel(R) Xeon(R) Processor X5675
CPU MHz:	3067
FPU:	Integrated
CPU(s) enabled:	12 cores, 2 chips, 6 cores/chip, 2 threads/core
CPU(s) orderable:	1-2
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 (6 x 4 GB, 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem:	8.2 TB RAID 5 64 x 146 GB FC (Seagate Cheetah 15K.5)
Other Hardware:	None

Software

OpenMP Threads:	24
Parallel:	OpenMP
Operating System:	SUSE Linux Enterprise Server 11 SP1, Kernel 2.6.32.27-0.2-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

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================================================================================
BIOS settings notes:
  Intel Hyper-Threading Technology (SMT): Enabled
  Intel Turbo Boost Technology (Turbo)  : Enabled (Max 3.46GHz)

================================================================================
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 unlimited

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)

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  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

================================================================================
Additional notes for disk subsystem:
   The disk subsystem is mounted through NFS over IPoIB via 4x DDR
   InfiniBand network. The local disk on the system is only for the OS.
```