OMPL2001 Result

SGI

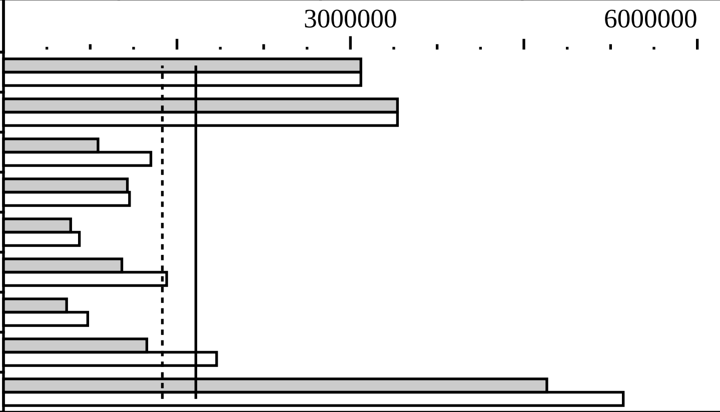
SGI Altix UV 1000 (Intel Xeon X7542, 2.66GHz)

SPECompLpeak2001 = 1663244

SPECompLbase2001 = 1373777

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	47.6	3090602	47.6	3090602
313.swim_l	12500	58.7	3407019	58.7	3407019
315.mgrid_l	13500	264	817431	169	1274485
317.applu_l	13500	202	1071232	198	1089674
321.equake_l	13000	358	580927	317	656130
325.apsi_l	10500	164	1023527	119	1411011
327.gafort_l	11000	322	545860	242	728449
329.fma3d_l	23500	303	1239388	204	1842913
331.art_l	25000	85.1	4698778	74.6	5359593



Hardware

CPU:	Intel(R) Xeon(R) Processor X7542
CPU MHz:	2667
FPU:	Integrated
CPU(s) enabled:	384 cores, 64 chips, 6 cores/chip
CPU(s) orderable:	2-256 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:	18 MB I+D on chip
Other Cache:	N/A
Memory:	2048 GB (512 x 4 GB Quad-rank DDR3-1066 CL7 DIMMs)
Disk Subsystem:	36 TB RAID 5 80 x 450 GB FC (Seagate Cheetah 15K.6)
Other Hardware:	

Software

OpenMP Threads:	384
Parallel:	OpenMP
Operating System:	SUSE Linux Enterprise Server 11 SP1, Kernel 2.6.32.12-0.7.1.1381.1.PTF-default
Compiler:	Intel(r) C++ Compiler XE, version 12.0 Beta, Build 20100706 Intel(r) Visual Fortran Compiler XE, version 12.0 Beta, Build 20100706
File System:	xfs
System State:	Multi-user, run level 3

Notes/Tuning Information

```
=========================================================================
BIOS settings notes:
  Intel Turbo Boost Technology (Turbo)  : Enabled (Max 2.80GHz)

=========================================================================
Extra Flags:
  331.art_l: -DINTS_PER_CACHELINE=16 -DDBLS_PER_CACHELINE=8

=========================================================================
General Notes and Enviroment 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
  COPTIMIZE  = -ansi-alias
```

Notes/Tuning Information (Continued)

```
    export KMP_AFFINITY=scatter,1

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

  Peak per-benchmark optimization flags and environment variables:
  ========================================================================
  311.wupwise_l
    basepeak = yes

  ========================================================================
  313.swim_m
    basepeak = yes

  ========================================================================
  315.mgrid_l
    OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp -rcd
    export OMP_NUM_THREADS=264
  ========================================================================
  317.applu_l
   OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp -rcd -mcmodel=medium -shared-intel
    export OMP_NUM_THREADS=360

  ========================================================================
  321.equake_l
    export OMP_NUM_THREADS=240

  ========================================================================
  325.apsi_l
    OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp
    export KMP_AFFINITY=scatter,0
    export OMP_NUM_THREADS=240

  ========================================================================
  327.gafort_l
    OPTIMIZE=-O3 -xSSE4.2 -ipo1 -openmp -rcd -mcmodel=medium -shared-intel
    export KMP_AFFINITY=scatter,0
    export OMP_NUM_THREADS=288

  ========================================================================
  329.fma3d_l
    FOPTIMIZE=-no-prec-sqrt -fp-model fast=2
    export KMP_AFFINITY=scatter,0

  ========================================================================
  331.art_l
    COPTIMIZE=-ansi-alias
    export OMP_NUM_THREADS=192
```