OMPL2001 Result

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SGI

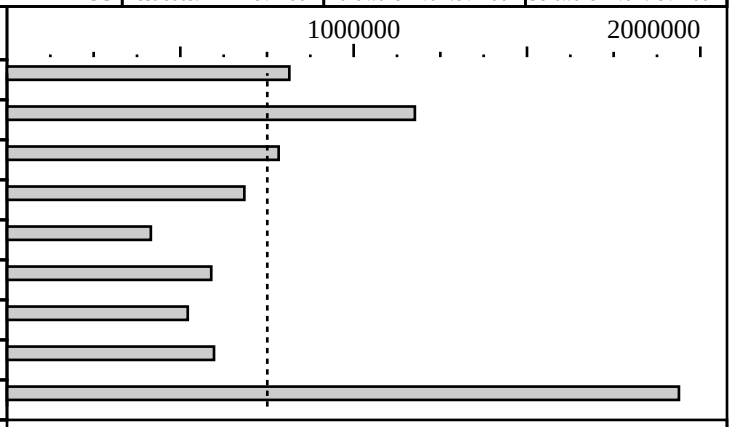
SGI Altix 3700 Bx2 (1600MHz 6M L3, Itanium 2)

SPECompLpeak2001 = --

SPECompLbase2001 = 750847

SPEC license #:	HPG0014	Tested by:	SGI	Test site:	SGI	Test date:	Nov-2004	Hardware Avail:	Nov-2004	Software Avail:	Nov-2004

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	181	814456		
313.swim_l	12500	170	1176560		
315.mgrid_l	13500	276	783604		
317.applu_l	13500	315	684654		
321.equake_l	13000	501	414957		
325.apsi_l	10500	285	589177		
327.gafort_l	11000	338	521378		
329.fma3d_l	23500	630	597161		
331.art_l	25000	206	1938287		



Hardware

CPU:	Intel Itanium 2
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	128 cores, 128 chips, 1 core/chip
CPU(s) orderable:	8-512
Primary Cache:	16KBI + 16KBD (on chip) per core
Secondary Cache:	256KB (on chip) per core
L3 Cache:	6.0MB (on chip) per core
Other Cache:	N/A
Memory:	256 GB (32*512MB PC2700 DIMMS per 8 core module)
Disk Subsystem:	1x73 GB SCSI (Seagate Cheetah 10k rpm)
Other Hardware:	None

Software

OpenMP Threads:	128
Parallel:	OpenMP
Operating System:	SGI ProPack(TM) 3 Service Pack 1
Compiler:	Intel(R) Fortran Compiler for Linux 8.1 (Build 20041021) Intel(R) C++ Compiler for Linux 8.1 (Build 20041021)
File System:	xfs
System State:	Multi-user

Notes/Tuning Information

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Baseline optimization flags:
  C programs:       -openmp -O3 -IPF_fp_relaxed -ipo -ansi -ansi_alias (ONESTEP)
  Fortran programs: -openmp -O3 -IPF_fp_relaxed -ipo (ONESTEP)
  OpenMP runtime library libguide.a statically linked

Extra Flags:
  331.art_l: -DINTS_PER_CACHELINE=32 -DDBLS_PER_CACHELINE=16

User environment:
  OMP_NUM_THREADS 128
  limit stacksize 256000
  KMP_STACKSIZE 124M
  KMP_LIBRARY TURNAROUND
  OMP_DYNAMIC FALSE
  KMP_SCHEDULE static,balanced

Peak optimization flags
311.wupwise_l: basepeak=true
313.swim_l: basepeak=true
315.mgrid_l: basepeak=true
317.applu_l: basepeak=true
321.equake_l: basepeak=true
325.apsi_l: basepeak=true
327.gafort_l: basepeak=true
329.fma3d_l: basepeak=true
331.art_l: basepeak=true
```

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Notes/Tuning Information (Continued)

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Required alternate sources:
Add critical region around update of linked list in parallel loop.
Approved src.alt available as ompl-purdue1-20040324.tar.gz
Used for 331.art_l, base and peak.


For all benchmarks threads were bound to cores using the following submit command:
dplace -x2 -cNTM1,0 $command,
where NTM1 is the number of threads minus 1.
This binds threads in order of creation, beginning with the master
thread on core NTM1, the first slave thread on core NTM1-1, and so on.
The -x2 flag instructs dplace to skip placement of the lightweight
OpenMP monitor thread, which is created prior to the slave threads.

For a description of SGI's compiler flags, portability flags, and
system parameters used to generate this result, please refer to the
SGI-20041118-Linux-Intel8.1-IPF.txt file in the flags directory.
```