OMPL2001 Result

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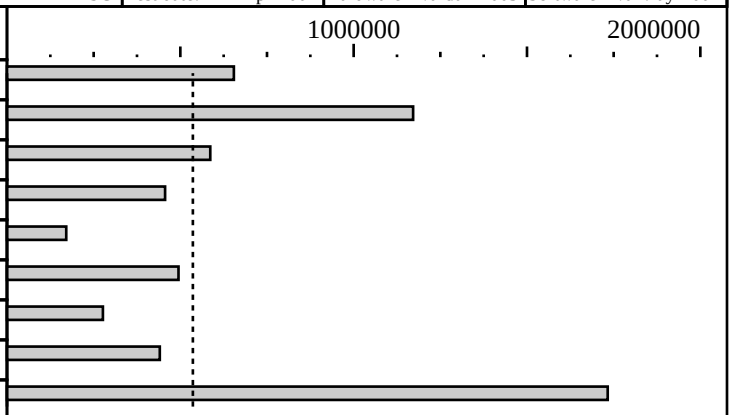
SGI
SGI Altix 3000 (1500MHz, Itanium 2)

SPECompLpeak2001 = --

SPECompLbase2001 = 536169

SPEC license #HPG0014 | Tested by: SGI | Test site: SGI | Test date: Apr-2004 | Hardware Avail: Jun-2003 | Software Avail: May-2004

Benchmark	Reference Time	Base Runtime	Base Ratio	Peak Runtime	Peak Ratio
311.wupwise_l	9200	225	654427		
313.swim_l	12500	171	1171495		
315.mgrid_l	13500	368	586350		
317.applu_l	13500	474	456023		
321.equake_l	13000	1217	170902		
325.apsi_l	10500	340	494730		
327.gafort_l	11000	636	276645		
329.fma3d_l	23500	853	440745		
331.art_l	25000	231	1732791		



Hardware

CPU:	Intel Itanium 2
CPU MHz:	1500
FPU:	Integrated
CPU(s) enabled:	128 cores, 128 chips, 1 core/chip
CPU(s) orderable:	4-256
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:	512 GB (16 x 1024 MB PC2700 DIMMs per 4 core module)
Disk Subsystem:	1 x 36 GB SCSI (Seagate Cheetah 15k rpm)
Other Hardware:	None

Software

OpenMP Threads:	128
Parallel:	OpenMP
Operating System:	SGI ProPack(TM) 3
Compiler:	Intel(R) Fortran Compiler for Linux 8.0 (Build 20040416) Intel(R) C++ Compiler for Linux 8.0 (Build 20040416)
File System:	xfs
System State:	Single-user

Notes/Tuning Information

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

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

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

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.

For all benchmarks threads were bound to CPUs 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 cpu NTM1, the first slave thread on cpu NTM1-1, and so on.
```

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Notes/Tuning Information (Continued)

The -x2 flag instructs dplace to skip placement of the lightweight
OpenMP monitor thread, which is created prior to the slave threads.