



SPEC® CFP2006 Result

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SGI

SGI Altix 4700 Bandwidth System (Dual-Core
Intel Itanium 2 9040 1.60GHz/18M)

SPECfp_rate2006 = Not Run

SPECfp_rate_base2006 = 10600

CPU2006 license: 4

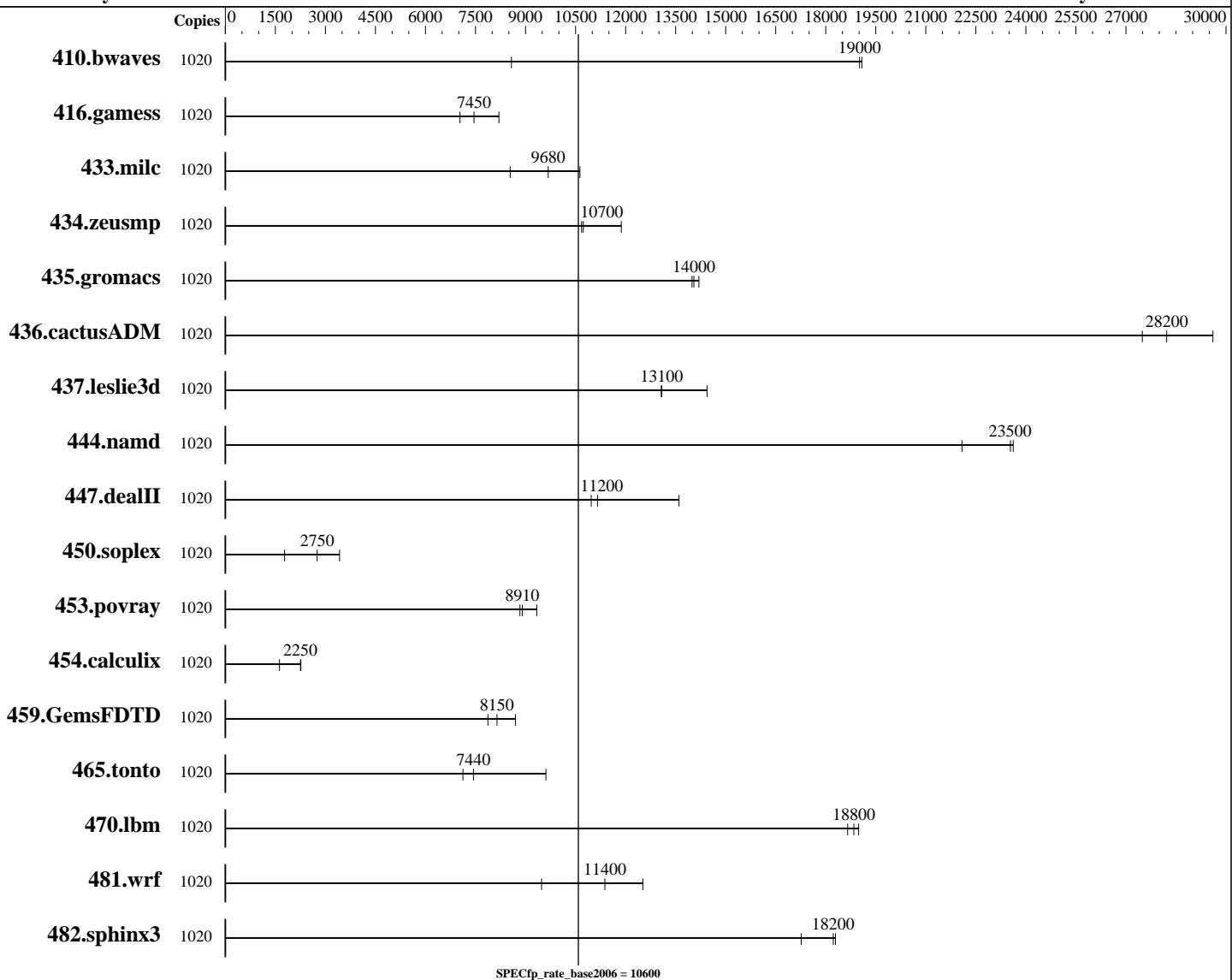
Test sponsor: SGI

Tested by: SGI

Test date: Jul-2009

Hardware Availability: Nov-2007

Software Availability: Jul-2009



Hardware

CPU Name: Dual-Core Intel Itanium 2 9040
CPU Characteristics: 533MHz FSB
CPU MHz: 1594
FPU: Integrated
CPU(s) enabled: 1024 cores, 512 chips, 2 cores/chip
CPU(s) orderable: 8 to 512 blades with 1 chip per blade
Primary Cache: 16 KB I + 16 KB D on chip per core
Secondary Cache: 1 MB I + 256 KB D on chip per core

Software

Operating System: SUSE Linux Enterprise Server 10 (ia64).SP2,
Kernel 2.6.16.60-0.35.PTF.352893.0-default
Compiler: Intel Fortran Compiler for Linux 11.1
(Build 20090630)
Intel C++ Compiler for Linux 11.1
(Build 20090630)
Auto Parallel: No
File System: xfs
System State: Multi-user, run level 3

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L3 Cache: 9 MB I+D on chip per core
Other Cache: None
Memory: 4 TB (8*1GB DDR2-400 DIMMS per blade)
Disk Subsystem: 279 TB RAID5
1024 x 300 GB FC (Hitachi Ultrastar 10k rpm)
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: Not Applicable
Other Software: SGI ProPack 6 Service Pack 2

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	1020	1616	8580	726	19100	<u>729</u>	<u>19000</u>							
416.gamess	1020	<u>2679</u>	<u>7450</u>	2839	7030	2435	8200							
433.milc	1020	<u>967</u>	<u>9680</u>	881	10600	1096	8540							
434.zeusmp	1020	<u>865</u>	<u>10700</u>	869	10700	782	11900							
435.gromacs	1020	513	14200	<u>518</u>	<u>14000</u>	521	14000							
436.cactusADM	1020	<u>432</u>	<u>28200</u>	443	27500	412	29600							
437.leslie3d	1020	734	13100	<u>733</u>	<u>13100</u>	664	14400							
444.namd	1020	370	22100	346	23600	<u>348</u>	<u>23500</u>							
447.dealII	1020	1064	11000	<u>1046</u>	<u>11200</u>	858	13600							
450.soplex	1020	2484	3420	4788	1780	<u>3090</u>	<u>2750</u>							
453.povray	1020	614	8830	<u>609</u>	<u>8910</u>	581	9340							
454.calculix	1020	<u>3735</u>	<u>2250</u>	5182	1620	3715	2260							
459.GemsFDTD	1020	<u>1329</u>	<u>8150</u>	1375	7870	1244	8700							
465.tonto	1020	1409	7120	1044	9610	<u>1349</u>	<u>7440</u>							
470.lbm	1020	751	18700	738	19000	<u>744</u>	<u>18800</u>							
481.wrf	1020	<u>1001</u>	<u>11400</u>	1202	9480	910	12500							
482.sphinx3	1020	<u>1091</u>	<u>18200</u>	1152	17300	1087	18300							

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The config file option 'submit' was used.

General Notes

Processes were bound to CPUs using dplace.
limit stacksize unlimited
System was configured with 4-cpu boot cpuset
echo 0 > /dev/cpuset/memory_spread_page
runspec was launched from root cpuset



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Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icc ifort

Base Portability Flags

```
410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
  433.milc: -DSPEC_CPU_LP64
  434.zeusmp: -DSPEC_CPU_LP64
  435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
  437.leslie3d: -DSPEC_CPU_LP64
    444.namd: -DSPEC_CPU_LP64
    447.dealII: -DSPEC_CPU_LP64
    450.soplex: -DSPEC_CPU_LP64
    453.povray: -DSPEC_CPU_LP64
    454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
  465.tonto: -DSPEC_CPU_LP64
  470.lbm: -DSPEC_CPU_LP64
    481.wrf: -DSPEC_CPU_LINUX -DSPEC_CPU_LINUX64_IPF
482.sphinx3: -DSPEC_CPU_LP64
```

Base Optimization Flags

C benchmarks:
-fast -fp-relaxed -opt-prefetch-issue-excl-hint -ansi-alias

C++ benchmarks:
-fast -fp-relaxed -opt-prefetch-issue-excl-hint -ansi-alias

Fortran benchmarks:
-fast -fp-relaxed -opt-prefetch-issue-excl-hint

Benchmarks using both Fortran and C:
-fast -fp-relaxed -opt-prefetch-issue-excl-hint -ansi-alias



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The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-ipf.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-ipf.xml>

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For other inquiries, please contact webmaster@spec.org.

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