



SPEC[®] CFP2006 Result

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SGI

SGI Altix 4700 Bandwidth System (Itanium 2 Processor 9040 1.6GHz/18M)

SPECfp[®]_rate2006 = 3510

SPECfp_rate_base2006 = 3420

CPU2006 license: 4

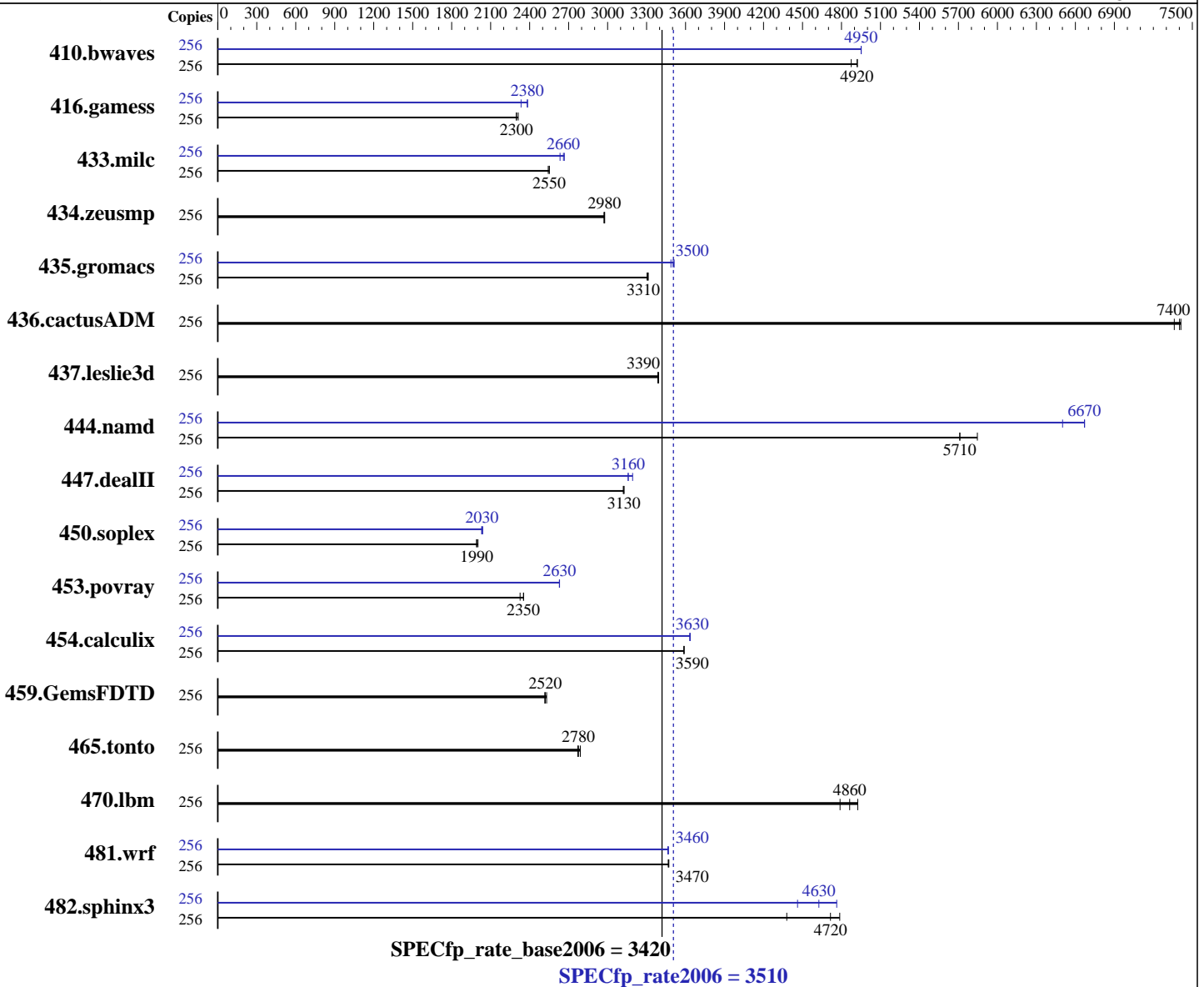
Test sponsor: SGI

Tested by: SGI

Test date: Jan-2007

Hardware Availability: Jul-2006

Software Availability: Aug-2006



Hardware

CPU Name: Dual-Core Intel Itanium 2 9040
 CPU Characteristics: 533MHz FSB
 CPU MHz: 1600
 FPU: Integrated
 CPU(s) enabled: 256 cores, 128 chips, 2 cores/chip
 CPU(s) orderable: 1-512 chips
 Primary Cache: 16 KB I + 16 KB D on chip per core
 Secondary Cache: 1 MB I + 256 KB D on chip per core

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Software

Operating System: SUSE Linux Enterprise Server 9 Service Pack 3 + SGI ProPack 4 Service Pack 3
 Compiler: Intel Fortran Compiler for Linux 9.1 (Build 20060818)
 Intel C++ Compiler for Linux 9.1 (Build 20060818)
 Auto Parallel: No
 File System: xfs
 System State: Multi-user

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L3 Cache: 9 MB I+D on chip per core
Other Cache: None
Memory: 4 TB (8*4GB DDR2-400 DIMMS per 2 core module)
Disk Subsystem: 16 x 37 GB FibreChannel (Seagate Cheetah 15k rpm)
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: --

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	256	714	4870	707	4920	707	4920	256	703	4950	703	4950	703	4950
416.gamess	256	2168	2310	2181	2300	2181	2300	256	2147	2330	2102	2380	2105	2380
433.milc	256	924	2540	921	2550	921	2550	256	892	2630	881	2670	883	2660
434.zeusmp	256	784	2970	783	2980	783	2980	256	784	2970	783	2980	783	2980
435.gromacs	256	552	3310	552	3310	553	3300	256	522	3500	520	3510	524	3490
436.cactusADM	256	413	7400	416	7360	413	7410	256	413	7400	416	7360	413	7410
437.leslie3d	256	710	3390	710	3390	709	3390	256	710	3390	710	3390	709	3390
444.namd	256	360	5710	360	5710	351	5850	256	308	6670	308	6670	316	6500
447.dealII	256	939	3120	937	3130	937	3130	256	917	3190	927	3160	927	3160
450.soplex	256	1066	2000	1071	1990	1072	1990	256	1052	2030	1047	2040	1050	2030
453.povray	256	585	2330	579	2350	579	2350	256	518	2630	518	2630	518	2630
454.calculix	256	589	3590	589	3590	589	3590	256	581	3640	581	3630	581	3630
459.GemsFDTD	256	1073	2530	1078	2520	1079	2520	256	1073	2530	1078	2520	1079	2520
465.tonto	256	909	2770	903	2790	907	2780	256	909	2770	903	2790	907	2780
470.lbm	256	714	4930	723	4860	735	4790	256	714	4930	723	4860	735	4790
481.wrf	256	824	3470	825	3470	825	3470	256	825	3460	824	3470	825	3460
482.sphinx3	256	1139	4380	1058	4720	1042	4790	256	1118	4460	1079	4630	1047	4760

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

General Notes

Processes were bound to CPUs using dplace.
limit stacksize unlimited

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

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Base Compiler Invocation (Continued)

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_LP64 -DSPEC_CPU_LINUX -DSPEC_CPU_CASE_FLAG
 482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:

-fast -IPF_fp_relaxed -ansi_alias

C++ benchmarks:

-fast -IPF_fp_relaxed -ansi_alias

Fortran benchmarks:

-fast -IPF_fp_relaxed

Benchmarks using both Fortran and C:

-fast -IPF_fp_relaxed -ansi_alias

Base Other Flags

C benchmarks:

-w

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Base Other Flags (Continued)

C++ benchmarks:

-w

Fortran benchmarks:

-w

Benchmarks using both Fortran and C:

-w

Peak Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icc ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: -fast -IPF_fp_relaxed -fno-alias -ansi_alias

470.lbm: basepeak = yes

482.sphinx3: -prof_gen(pass 1) -prof_use(pass 2) -fast -IPF_fp_relaxed
-ansi_alias

C++ benchmarks:

444.namd: -prof_gen(pass 1) -prof_use(pass 2) -fast -IPF_fp_relaxed
-no-prefetch -auto_ilp32 -fno-alias -ansi_alias

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Peak Optimization Flags (Continued)

447.deallII: -fast -IPF_fp_relaxed -auto_ilp32 -no-alias-args
-ansi_alias

450.soplex: -fast -IPF_fp_relaxed -auto_ilp32 -inline-factor=150
-ansi_alias

453.povray: -prof_gen(pass 1) -prof_use(pass 2) -fast -IPF_fp_relaxed
-ansi_alias

Fortran benchmarks:

410.bwaves: -prof_gen(pass 1) -prof_use(pass 2) -fast -IPF_fp_relaxed

416.gamess: -fast -IPF_fp_relaxed -inline-factor=150

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: basepeak = yes

Benchmarks using both Fortran and C:

435.gromacs: -prof_gen(pass 1) -prof_use(pass 2) -fast -IPF_fp_relaxed
-fno-alias -inline-factor=150 -ansi_alias

436.cactusADM: basepeak = yes

454.calculix: -fast -IPF_fp_relaxed -fno-alias -ansi_alias

481.wrf: -fast -IPF_fp_relaxed -ansi_alias

Peak Other Flags

C benchmarks:

-w

C++ benchmarks:

-w

Fortran benchmarks:

-w

Benchmarks using both Fortran and C:

-w



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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-ic91-ipf.20090715.00.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic91-ipf.20090715.00.xml>

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