SPEC® CFP2006 Result

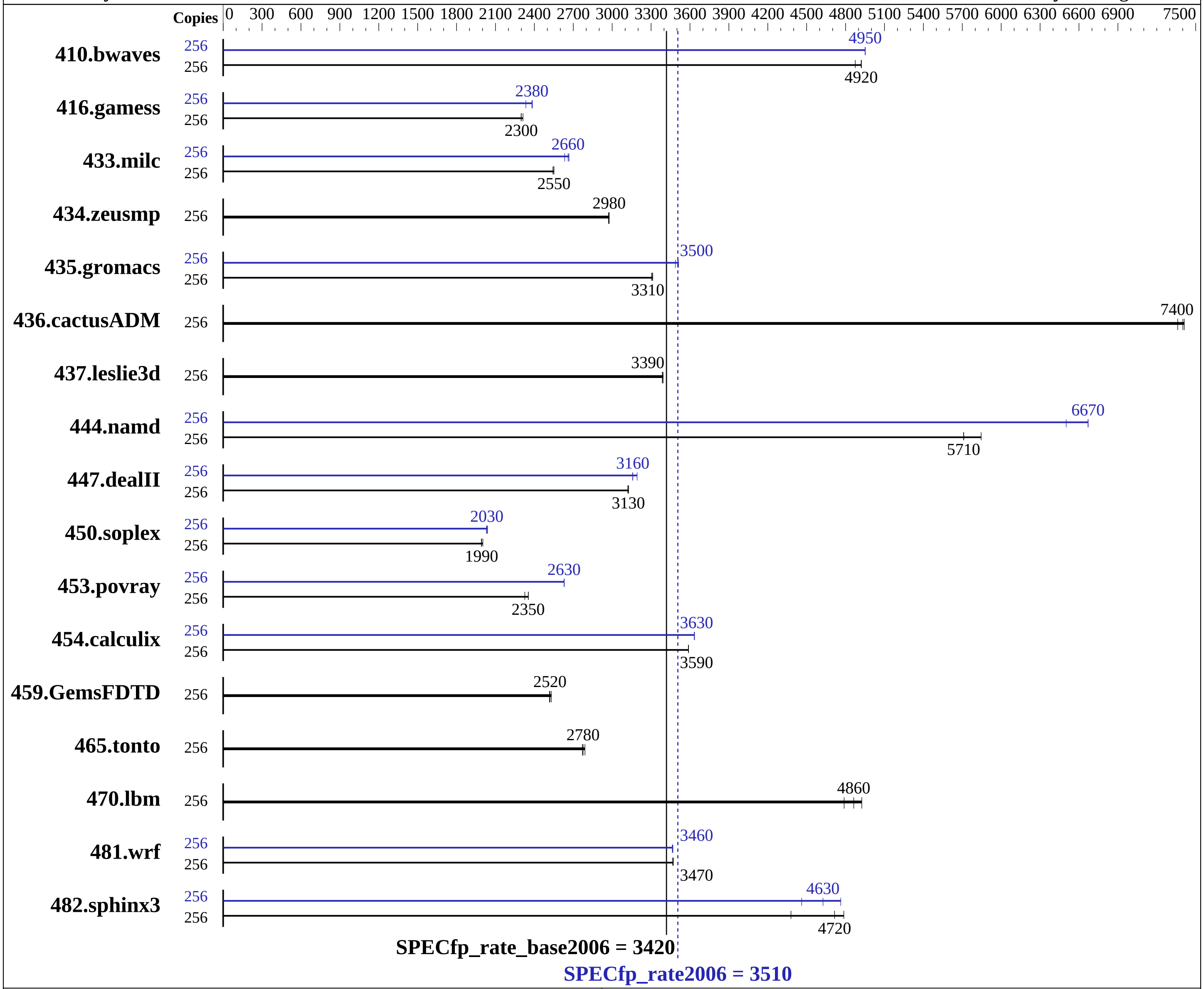
SGI

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

SPECfp®_rate2006 = 3510

SPECfp_rate_base2006 = 3420

CPU2006 license: 4		**Test date:**	Jan-2007
Test sponsor:	SGI	**Hardware Availability:**	Jul-2006
Tested by:	SGI	**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

	Base							Peak						
Benchmark	**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.dealII: -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

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.0.
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