



SPEC® CFP2006 Result

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Fujitsu Siemens Computers

PRIMERGY RX220, AMD Opteron 280 processor,
2.40 GHz

SPECfp®_rate2006 = 36.9

SPECfp_rate_base2006 = 35.4

CPU2006 license: 22

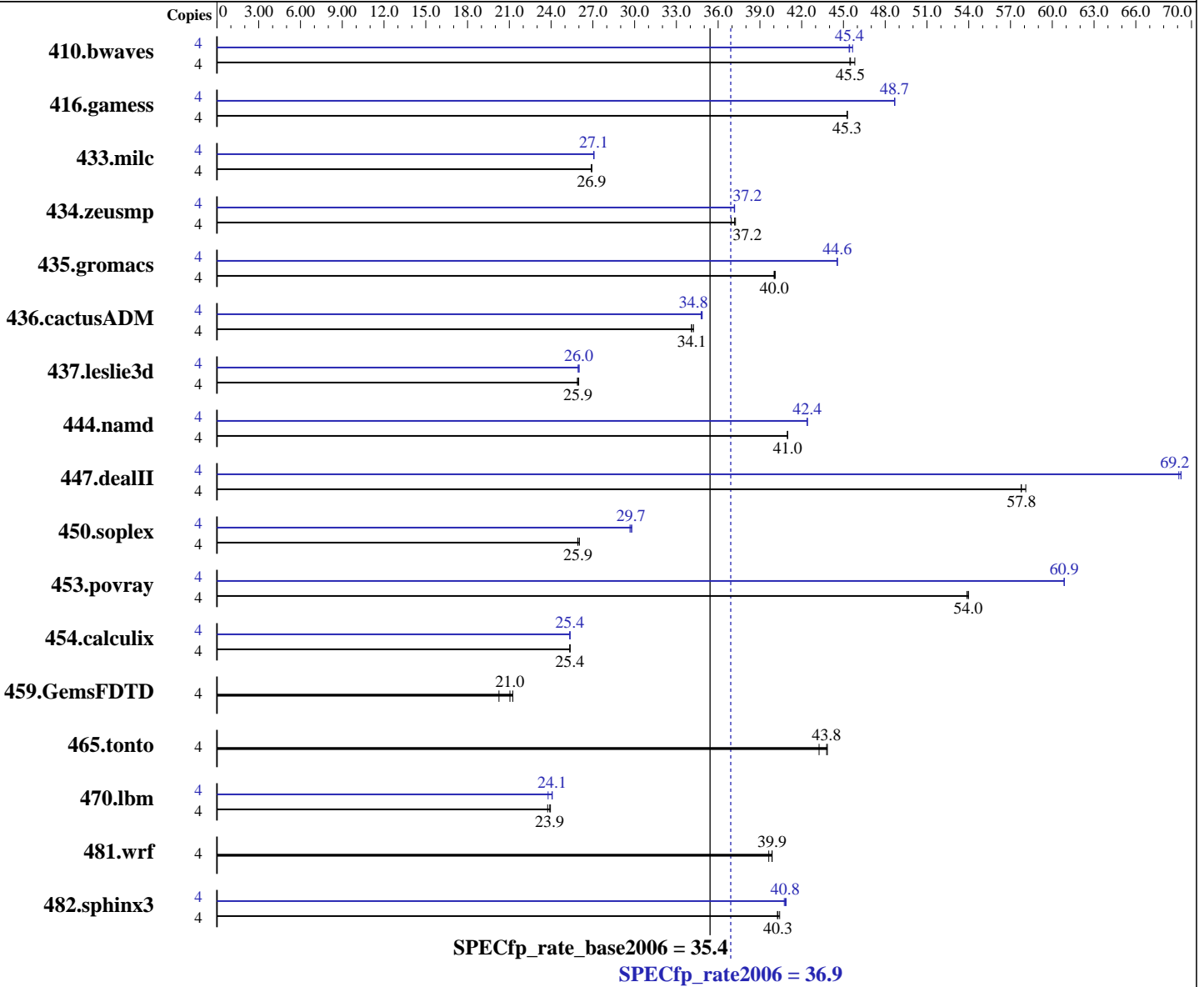
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Apr-2006

Hardware Availability: Dec-2005

Software Availability: Mar-2006



Hardware

CPU Name: AMD Opteron 280
 CPU Characteristics: Opteron 280
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
 CPU(s) orderable: 1,2 chips
 Primary Cache: 64 KB I + 64 KB D on chip per core
 Secondary Cache: 1 MB I+D on chip per core

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Software

Operating System: SuSE Linux Enterprise Server 9 (x86_64) + SP3
 Compiler: QLogic Pathscale Compiler Suite 2.4
 Auto Parallel: No
 File System: ext3
 System State: Multi-user run level 3
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit
 Other Software: None



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L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2 GB DDR PC-3200R 2-rank CAS 3-3-3)
Disk Subsystem: Western Digital WD2500 (SATA, 7.2krpm)
Other Hardware: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	1186	45.8	<u>1195</u>	<u>45.5</u>	1196	45.5	4	1191	45.7	1197	45.4	<u>1196</u>	<u>45.4</u>
416.gamess	4	<u>1730</u>	<u>45.3</u>	1730	45.3	1730	45.3	4	1609	48.7	<u>1609</u>	<u>48.7</u>	1609	48.7
433.milc	4	1364	26.9	<u>1364</u>	<u>26.9</u>	1365	26.9	4	<u>1356</u>	<u>27.1</u>	1357	27.1	1356	27.1
434.zeusmp	4	977	37.2	<u>979</u>	<u>37.2</u>	985	36.9	4	979	37.2	980	37.2	<u>979</u>	<u>37.2</u>
435.gromacs	4	714	40.0	712	40.1	<u>713</u>	<u>40.0</u>	4	641	44.6	641	44.6	<u>641</u>	<u>44.6</u>
436.cactusADM	4	<u>1402</u>	<u>34.1</u>	1396	34.2	1402	34.1	4	1374	34.8	1371	34.9	<u>1373</u>	<u>34.8</u>
437.leslie3d	4	1447	26.0	<u>1450</u>	<u>25.9</u>	1452	25.9	4	1445	26.0	<u>1446</u>	<u>26.0</u>	1450	25.9
444.namd	4	783	41.0	<u>783</u>	<u>41.0</u>	783	41.0	4	756	42.4	757	42.4	<u>757</u>	<u>42.4</u>
447.dealII	4	<u>792</u>	<u>57.8</u>	788	58.1	792	57.8	4	661	69.3	662	69.1	<u>661</u>	<u>69.2</u>
450.soplex	4	1281	26.0	1287	25.9	<u>1286</u>	<u>25.9</u>	4	1119	29.8	<u>1122</u>	<u>29.7</u>	1125	29.7
453.povray	4	394	54.0	<u>394</u>	<u>54.0</u>	395	53.9	4	<u>350</u>	<u>60.9</u>	350	60.9	350	60.9
454.calculix	4	1301	25.4	<u>1302</u>	<u>25.4</u>	1302	25.4	4	<u>1301</u>	<u>25.4</u>	1302	25.3	1301	25.4
459.GemsFDTD	4	2095	20.3	1997	21.3	<u>2017</u>	<u>21.0</u>	4	2095	20.3	1997	21.3	<u>2017</u>	<u>21.0</u>
465.tonto	4	<u>899</u>	<u>43.8</u>	898	43.8	910	43.2	4	<u>899</u>	<u>43.8</u>	898	43.8	910	43.2
470.lbm	4	<u>2299</u>	<u>23.9</u>	2314	23.8	2294	24.0	4	2311	23.8	2282	24.1	<u>2283</u>	<u>24.1</u>
481.wrf	4	<u>1121</u>	<u>39.9</u>	1120	39.9	1127	39.6	4	<u>1121</u>	<u>39.9</u>	1120	39.9	1127	39.6
482.sphinx3	4	1929	40.4	<u>1935</u>	<u>40.3</u>	1937	40.3	4	1913	40.7	<u>1910</u>	<u>40.8</u>	1907	40.9

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

General Notes

taskset has been used to bind processes to CPUs

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Base Compiler Invocation

C benchmarks:
pathcc

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Base Compiler Invocation (Continued)

C++ benchmarks:
pathCC

Fortran benchmarks:
pathf95

Benchmarks using both Fortran and C:
pathcc pathf95

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
 436.cactusADM: -DSPEC_CPU_LP64 -fno-second-underscore
 437.leslie3d: -DSPEC_CPU_LP64
 444.namd: -DSPEC_CPU_LP64
 447.dealII: -DSPEC_CPU_LP64 -DSPEC_CPU_TABLE_WORKAROUND
 450.soplex: -DSPEC_CPU_LP64
 453.povray: -DSPEC_CPU_LP64
 454.calculix: -DSPEC_CPU_LP64
 459.GemsFDTD: -DSPEC_CPU_LP64
 465.tonto: -DSPEC_CPU_LP64
 470.lbm: -DSPEC_CPU_LP64
 481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX -fno-second-underscore
 482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-Ofast

C++ benchmarks:
-Ofast

Fortran benchmarks:
-Ofast

Benchmarks using both Fortran and C:
-Ofast



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Peak Compiler Invocation

C benchmarks:
pathcc

C++ benchmarks:
pathCC

Fortran benchmarks:
pathf95

Benchmarks using both Fortran and C:
pathcc pathf95

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -Ofast

470.lbm: Same as 433.milc

482.sphinx3: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -O3
-LNO:sclrze=off -LNO:prefetch=1

C++ benchmarks:

444.namd: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -Ofast

447.deallI: -Ofast -m32 -fno-exceptions

450.soplex: -m32 -O3 -OPT:IEEE_arith=3 -CG:load_exe=0 -CG:movnti=1
-LNO:minvariant=off -fno-exceptions

453.povray: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -Ofast
-fno-fast-math

Fortran benchmarks:

410.bwaves: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -O3
-OPT:Ofast -OPT:IEEE_arith=3 -LNO:blocking=off
-LNO:ignore_feedback=off

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Peak Optimization Flags (Continued)

416.gamess: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -Ofast

434.zeusmp: -O3 -CG:load_exe=0

437.leslie3d: -O3 -OPT:Ofast

459.GemsFDTD: basepeak = yes

465.tonto: basepeak = yes

Benchmarks using both Fortran and C:

435.gromacs: -O3 -OPT:rsqrt=2 -OPT:ro=3

436.cactusADM: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -O3
-LNO:prefetch_ahead=5 -LNO:ou_prod_max=10 -LNO:full_unroll=5
-ipa

454.calculix: -Ofast

481.wrf: basepeak = yes

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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090715.02.html

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

http://www.spec.org/cpu2006/flags/CPU2006_flags.20090715.02.xml

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

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