



SPEC[®] CFP2006 Result

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Fujitsu Siemens Computers

SPECfp[®]_rate2006 = 61.1

PRIMERGY TX300 S4, Intel Xeon X5270, 3.50 GHz

SPECfp_rate_base2006 = 57.3

CPU2006 license: 22

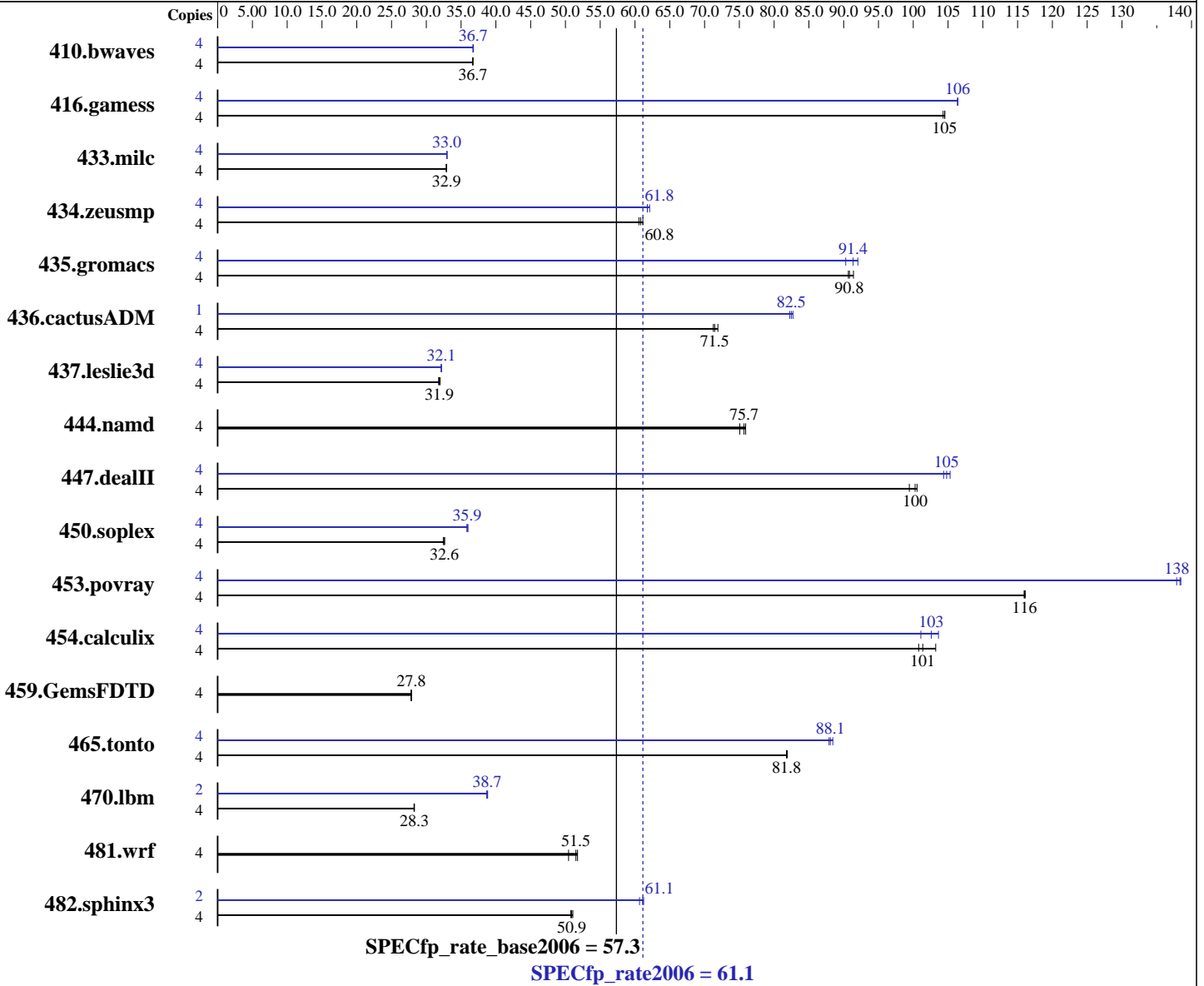
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Oct-2008

Hardware Availability: Oct-2008

Software Availability: Nov-2008



Hardware

CPU Name: Intel Xeon X5270
 CPU Characteristics: 1333 MHz system bus
 CPU MHz: 3500
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 6 MB I+D on chip per chip

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Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP2, Kernel 2.6.16.60-0.21-smp
 Compiler: Intel C++ and Fortran Compiler 11.0 for Linux Build 20080730 Package ID: l_cproc_b_11.0.042, l_fproc_b_11.0.042
 Auto Parallel: Yes
 File System: ext3
 System State: Multi-User Run Level 3
 Base Pointers: 64-bit

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L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: 1x SATA, 160 GB, 7200 rpm
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: Binutils 2.18.50.0.7.20080502

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	1483	36.7	1481	36.7	<u>1481</u>	<u>36.7</u>	4	1481	36.7	<u>1480</u>	<u>36.7</u>	1480	36.7
416.gamess	4	749	105	<u>749</u>	<u>105</u>	751	104	4	<u>736</u>	<u>106</u>	736	106	736	106
433.milc	4	1117	32.9	<u>1116</u>	<u>32.9</u>	1116	32.9	4	1114	33.0	<u>1114</u>	<u>33.0</u>	1114	33.0
434.zeusmp	4	<u>599</u>	<u>60.8</u>	596	61.1	601	60.6	4	<u>589</u>	<u>61.8</u>	589	61.8	586	62.1
435.gromacs	4	315	90.7	<u>314</u>	<u>90.8</u>	312	91.4	4	<u>313</u>	<u>91.4</u>	310	92.0	316	90.3
436.cactusADM	4	671	71.3	<u>669</u>	<u>71.5</u>	665	71.9	1	144	82.7	<u>145</u>	<u>82.5</u>	145	82.2
437.leslie3d	4	1184	31.8	<u>1180</u>	<u>31.9</u>	1176	32.0	4	<u>1170</u>	<u>32.1</u>	1170	32.1	1169	32.2
444.namd	4	423	75.9	427	75.1	<u>424</u>	<u>75.7</u>	4	423	75.9	427	75.1	<u>424</u>	<u>75.7</u>
447.dealII	4	455	101	460	99.4	<u>456</u>	<u>100</u>	4	435	105	438	104	<u>437</u>	<u>105</u>
450.soplex	4	1028	32.4	<u>1023</u>	<u>32.6</u>	1023	32.6	4	931	35.8	<u>930</u>	<u>35.9</u>	927	36.0
453.povray	4	183	116	184	116	<u>183</u>	<u>116</u>	4	<u>154</u>	<u>138</u>	154	138	154	138
454.calculix	4	320	103	<u>326</u>	<u>101</u>	327	101	4	318	104	<u>322</u>	<u>103</u>	326	101
459.GemsFDTD	4	<u>1525</u>	<u>27.8</u>	1527	27.8	1523	27.9	4	<u>1525</u>	<u>27.8</u>	1527	27.8	1523	27.9
465.tonto	4	481	81.9	481	81.8	<u>481</u>	<u>81.8</u>	4	<u>447</u>	<u>88.1</u>	445	88.4	448	87.9
470.lbm	4	1947	28.2	<u>1944</u>	<u>28.3</u>	1943	28.3	2	<u>710</u>	<u>38.7</u>	710	38.7	708	38.8
481.wrf	4	886	50.4	864	51.7	<u>867</u>	<u>51.5</u>	4	886	50.4	864	51.7	<u>867</u>	<u>51.5</u>
482.sphinx3	4	<u>1531</u>	<u>50.9</u>	1527	51.1	1536	50.8	2	<u>638</u>	<u>61.1</u>	643	60.7	636	61.2

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.
taskset has been used to bind processes to cores except
for 436.cactusADM peak

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to "physical,0"
KMP_STACKSIZE set to 64M



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Platform Notes

BIOS configuration:
Memory Throttling = Enable

General Notes

For information about Fujitsu Siemens Computers please see:
<http://www.fujitsu-siemens.com>

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.deallI: -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_CASE_FLAG -DSPEC_CPU_LINUX
 482.sphinx3: -DSPEC_CPU_LP64



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Base Optimization Flags

C benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

C++ benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

Fortran benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

Benchmarks using both Fortran and C:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

Peak Compiler Invocation

C benchmarks (except as noted below):

icc

482.sphinx3: /opt/intel/Compiler/11.0/042/bin/ia32/icc
-L/opt/intel/Compiler/11.0/042/ipp/ia32/lib
-I/opt/intel/Compiler/11.0/042/ipp/ia32/include

C++ benchmarks (except as noted below):

icpc

450.soplex: /opt/intel/Compiler/11.0/042/bin/ia32/icpc
-L/opt/intel/Compiler/11.0/042/ipp/ia32/lib
-I/opt/intel/Compiler/11.0/042/ipp/ia32/include

Fortran benchmarks (except as noted below):

ifort

437.leslie3d: /opt/intel/Compiler/11.0/042/bin/ia32/ifort
-L/opt/intel/Compiler/11.0/042/ipp/ia32/lib
-I/opt/intel/Compiler/11.0/042/ipp/ia32/include

Benchmarks using both Fortran and C:

icc ifort

Peak 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

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Peak Portability Flags (Continued)

```

436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
444.namd: -DSPEC_CPU_LP64
447.dealII: -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_CASE_FLAG -DSPEC_CPU_LINUX

```

Peak Optimization Flags

C benchmarks:

```

433.milc: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -fno-alias

```

```

470.lbm: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch
-auto-ilp32

```

```

482.sphinx3: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2

```

C++ benchmarks:

```

444.namd: basepeak = yes

```

```

447.dealII: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -unroll2 -ansi-alias -scalar-rep-

```

```

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -opt-malloc-options=3

```

```

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -unroll4 -ansi-alias

```

Fortran benchmarks:

```

410.bwaves: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

```

```

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -unroll2 -Ob0 -ansi-alias
-scalar-rep-

```

```

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static

```

```

437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -opt-malloc-options=3 -opt-prefetch

```

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Peak Optimization Flags (Continued)

459.GemsFDTD: basepeak = yes

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -unroll4 -auto

Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -opt-prefetch -auto-ilp32

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -unroll2 -opt-prefetch -parallel
-auto-ilp32

454.calculix: -xSSE4.1 -ipo -O3 -no-prec-div -static -auto-ilp32

481.wrf: basepeak = yes

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090713.14.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090713.14.xml>

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

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