



SPEC[®] CFP2006 Result

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Fujitsu

SPECfp[®]_rate2006 = 53.8

PRIMERGY RX100 S5, Intel Xeon X3380, 3.16 GHz

SPECfp_rate_base2006 = 51.7

CPU2006 license: 19

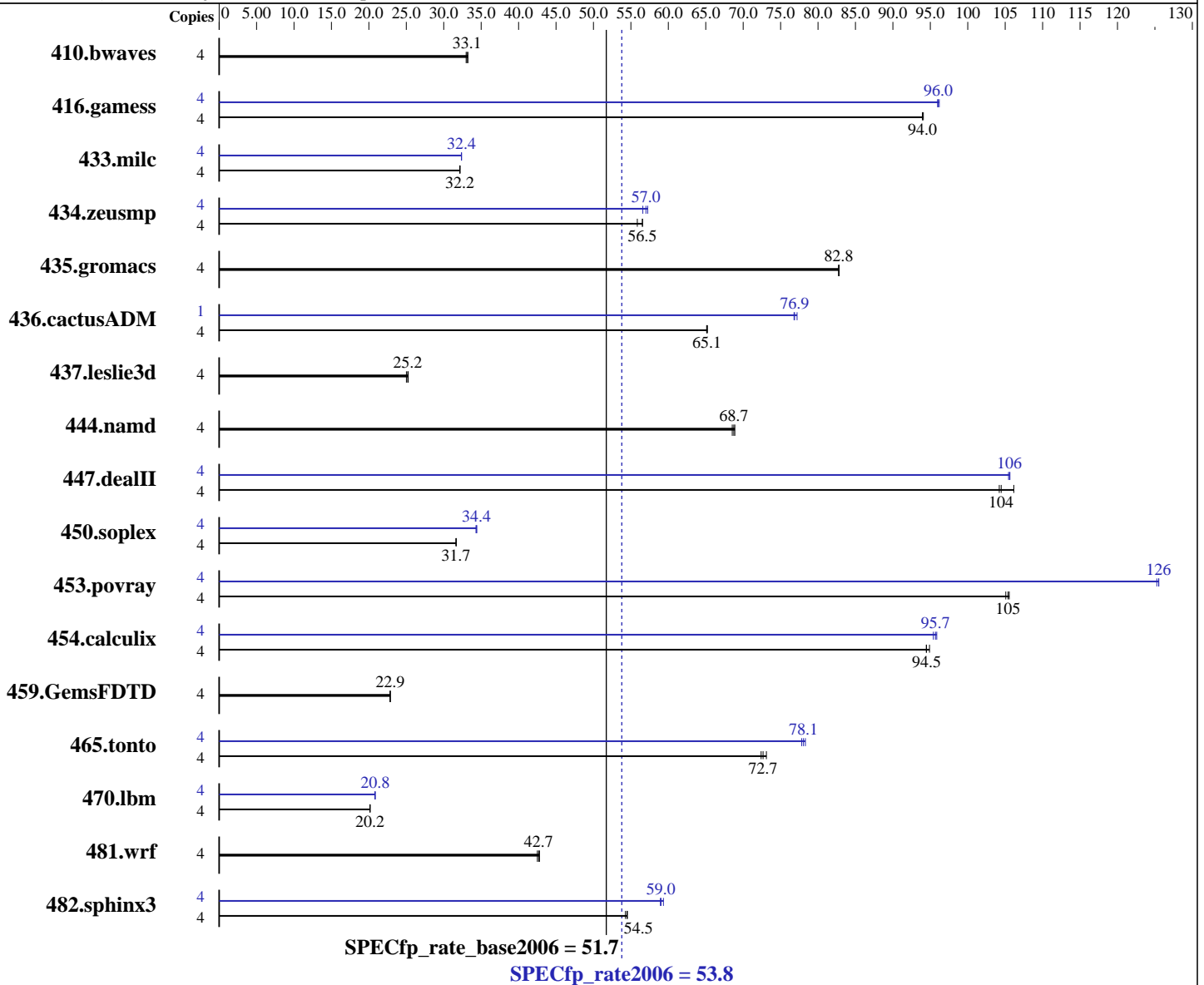
Test sponsor: Fujitsu

Tested by: Fujitsu Siemens Computers

Test date: Feb-2009

Hardware Availability: Apr-2009

Software Availability: Nov-2008



Hardware

CPU Name: Intel Xeon X3380
 CPU Characteristics: 1333 MHz system bus
 CPU MHz: 3167
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 CPU(s) orderable: 1 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 12 MB I+D on chip per chip, 6 MB shared / 2 cores

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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_11.0.066, l_fproc_b_11.0.066
 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: 8 GB (4x2 GB PC2-6400E, 2 rank, CL6-6-6, ECC)
Disk Subsystem: 1x SATA, 250 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	1636	33.2	<u>1642</u>	<u>33.1</u>	1648	33.0	4	1636	33.2	<u>1642</u>	<u>33.1</u>	1648	33.0
416.gamess	4	833	94.1	<u>834</u>	<u>94.0</u>	834	94.0	4	<u>815</u>	<u>96.0</u>	814	96.2	816	96.0
433.milc	4	1142	32.2	<u>1142</u>	<u>32.2</u>	1142	32.2	4	1134	32.4	<u>1134</u>	<u>32.4</u>	1135	32.4
434.zeusmp	4	<u>644</u>	<u>56.5</u>	652	55.9	644	56.6	4	<u>638</u>	<u>57.0</u>	636	57.2	643	56.6
435.gromacs	4	345	82.7	<u>345</u>	<u>82.8</u>	345	82.8	4	345	82.7	<u>345</u>	<u>82.8</u>	345	82.8
436.cactusADM	4	<u>734</u>	<u>65.1</u>	734	65.1	733	65.2	1	156	76.8	<u>155</u>	<u>76.9</u>	155	77.2
437.leslie3d	4	<u>1493</u>	<u>25.2</u>	1489	25.3	1503	25.0	4	<u>1493</u>	<u>25.2</u>	1489	25.3	1503	25.0
444.namd	4	466	68.9	<u>467</u>	<u>68.7</u>	468	68.5	4	466	68.9	<u>467</u>	<u>68.7</u>	468	68.5
447.dealII	4	439	104	431	106	<u>438</u>	<u>104</u>	4	434	105	433	106	<u>433</u>	<u>106</u>
450.soplex	4	1053	31.7	<u>1054</u>	<u>31.7</u>	1055	31.6	4	<u>970</u>	<u>34.4</u>	972	34.3	970	34.4
453.povray	4	203	105	<u>202</u>	<u>105</u>	202	106	4	170	125	<u>170</u>	<u>126</u>	170	126
454.calculix	4	348	94.9	349	94.5	<u>349</u>	<u>94.5</u>	4	344	95.9	<u>345</u>	<u>95.7</u>	346	95.4
459.GemsFDTD	4	1858	22.8	<u>1857</u>	<u>22.9</u>	1856	22.9	4	1858	22.8	<u>1857</u>	<u>22.9</u>	1856	22.9
465.tonto	4	544	72.4	538	73.1	<u>542</u>	<u>72.7</u>	4	<u>504</u>	<u>78.1</u>	506	77.8	503	78.3
470.lbm	4	2729	20.1	<u>2727</u>	<u>20.2</u>	2725	20.2	4	2642	20.8	2637	20.8	<u>2637</u>	<u>20.8</u>
481.wrf	4	1051	42.5	1044	42.8	<u>1047</u>	<u>42.7</u>	4	1051	42.5	1044	42.8	<u>1047</u>	<u>42.7</u>
482.sphinx3	4	1430	54.5	1437	54.3	<u>1431</u>	<u>54.5</u>	4	1323	58.9	1314	59.3	<u>1321</u>	<u>59.0</u>

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:
Hardware Prefetch = Disable, Adjacent Sector Prefetch = Disable

General Notes

The Fujitsu PRIMERGY RX100 S5 and the Fujitsu Siemens Computers PRIMERGY RX100 S5 are electronically equivalent.

For information about Fujitsu please visit: <http://www.fujitsu.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.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_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: icc -m32

C++ benchmarks (except as noted below):

icpc

450.soplex: icpc -m32

Fortran benchmarks:

ifort

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
 436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
 437.leslie3d: -DSPEC_CPU_LP64
 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

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Peak Portability Flags (Continued)

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: basepeak = yes

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: basepeak = yes

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:

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Peak Optimization Flags (Continued)

435.gromacs: basepeak = yes

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 files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090710.05.html>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090710.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090710.05.xml>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090710.xml>

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