



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp®2006 = 38.6

Sun Fire X2270 (Intel Xeon X5570 2.93GHz)

SPECfp_base2006 = 32.8

CPU2006 license: 6

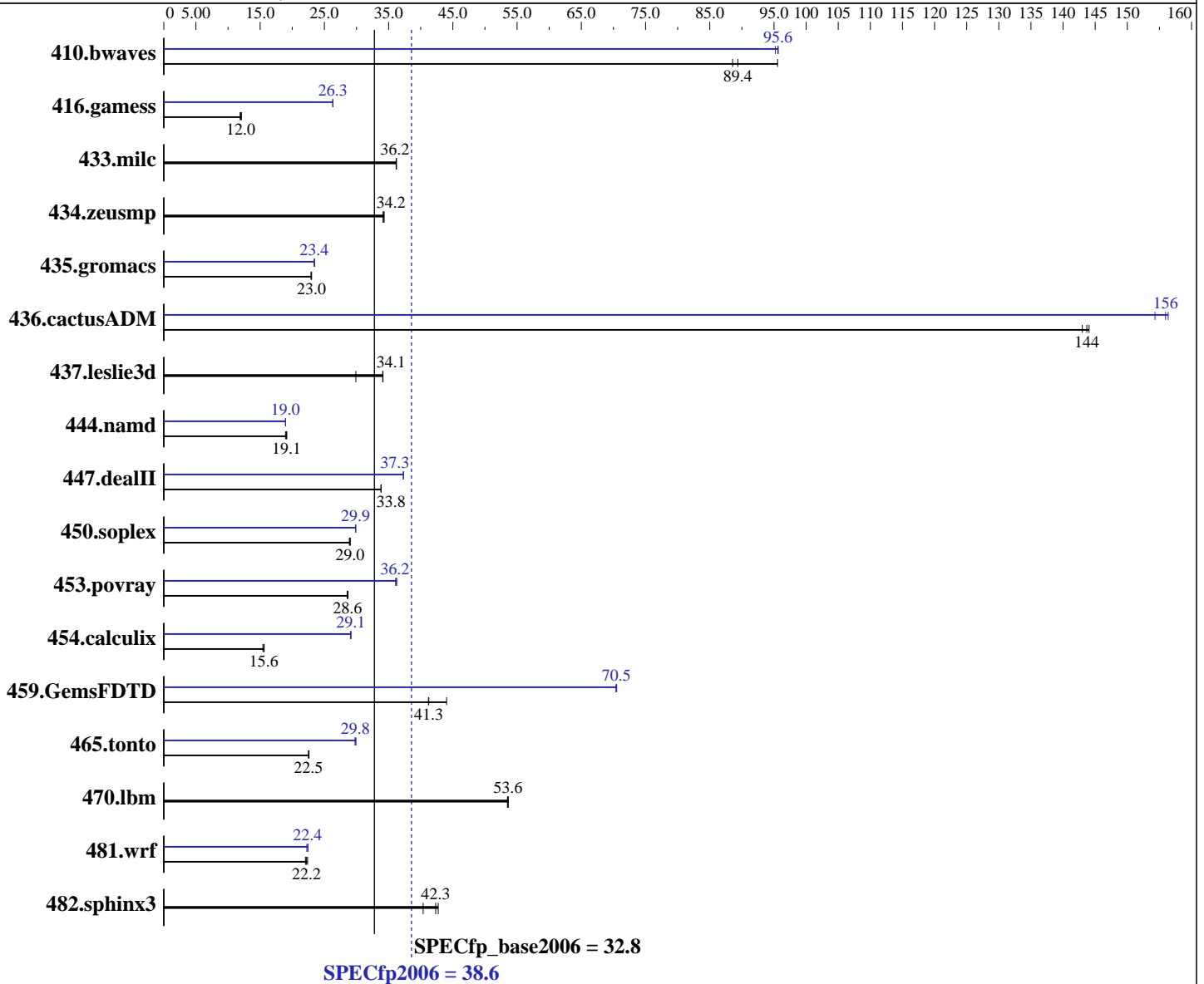
Test date: Mar-2009

Test sponsor: Sun Microsystems

Hardware Availability: Apr-2009

Tested by: Sun Microsystems

Software Availability: Nov-2008



Hardware

CPU Name: Intel Xeon X5570
 CPU Characteristics: Intel Turbo Boost Technology up to 3.33 GHz
 CPU MHz: 2933
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 1 or 2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core

Continued on next page

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 20080930 Package ID: I_cproc_p_11.0.066, I_cprof_p_11.0.066
 Auto Parallel: Yes
 File System: ReiserFS
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp2006 = **38.6**

Sun Fire X2270 (Intel Xeon X5570 2.93GHz)

SPECfp_base2006 = **32.8**

CPU2006 license: 6

Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Mar-2009

Hardware Availability: Apr-2009

Software Availability: Nov-2008

L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 24 GB (6 x 4 GB DDR3-1333)
Disk Subsystem: 1 x 1 TB, SATA, 7200 RPM
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: Binutils 2.18.50

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	<u>152</u>	<u>89.4</u>	153	88.6	142	95.6	<u>142</u>	<u>95.6</u>	143	95.2	142	95.7
416.gamess	<u>1634</u>	<u>12.0</u>	1647	11.9	1620	12.1	<u>744</u>	<u>26.3</u>	<u>744</u>	<u>26.3</u>	744	26.3
433.milc	<u>254</u>	<u>36.2</u>	253	36.2	254	36.2	<u>254</u>	<u>36.2</u>	253	36.2	254	36.2
434.zeusmp	265	34.3	<u>266</u>	<u>34.2</u>	266	34.2	<u>265</u>	<u>34.3</u>	<u>266</u>	<u>34.2</u>	266	34.2
435.gromacs	<u>311</u>	<u>23.0</u>	312	22.9	310	23.0	<u>305</u>	<u>23.4</u>	<u>305</u>	<u>23.4</u>	304	23.5
436.cactusADM	83.0	144	<u>83.2</u>	<u>144</u>	83.6	143	<u>77.4</u>	<u>154</u>	<u>76.6</u>	<u>156</u>	76.4	156
437.leslie3d	275	34.1	314	29.9	<u>276</u>	<u>34.1</u>	<u>275</u>	<u>34.1</u>	314	29.9	<u>276</u>	<u>34.1</u>
444.namd	419	19.1	423	18.9	<u>419</u>	<u>19.1</u>	<u>423</u>	<u>19.0</u>	423	18.9	<u>423</u>	<u>19.0</u>
447.dealII	338	33.8	338	33.8	<u>338</u>	<u>33.8</u>	<u>307</u>	<u>37.3</u>	307	37.3	307	37.3
450.soplex	287	29.0	289	28.9	<u>288</u>	<u>29.0</u>	<u>279</u>	<u>29.9</u>	<u>279</u>	<u>29.9</u>	279	29.9
453.povray	<u>186</u>	<u>28.6</u>	185	28.7	186	28.6	<u>147</u>	<u>36.2</u>	147	36.1	147	36.3
454.calculix	535	15.4	528	15.6	<u>529</u>	<u>15.6</u>	<u>283</u>	<u>29.1</u>	284	29.1	<u>283</u>	<u>29.1</u>
459.GemsFDTD	241	44.0	258	41.2	<u>257</u>	<u>41.3</u>	<u>151</u>	<u>70.4</u>	<u>151</u>	<u>70.5</u>	150	70.5
465.tonto	435	22.6	437	22.5	<u>437</u>	<u>22.5</u>	<u>329</u>	<u>29.9</u>	330	29.8	<u>330</u>	<u>29.8</u>
470.lbm	257	53.5	<u>256</u>	<u>53.6</u>	256	53.6	<u>257</u>	<u>53.5</u>	<u>256</u>	<u>53.6</u>	256	53.6
481.wrf	<u>503</u>	<u>22.2</u>	507	22.1	499	22.4	<u>497</u>	<u>22.5</u>	<u>498</u>	<u>22.4</u>	502	22.3
482.sphinx3	<u>460</u>	<u>42.3</u>	456	42.7	483	40.4	<u>460</u>	<u>42.3</u>	456	42.7	483	40.4

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

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run

Platform Notes

Default BIOS settings used.

General Notes

OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to "physical,0"
KMP_STACKSIZE set to 200M



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp2006 = 38.6

Sun Fire X2270 (Intel Xeon X5570 2.93GHz)

SPECfp_base2006 = 32.8

CPU2006 license: 6

Test date: Mar-2009

Test sponsor: Sun Microsystems

Hardware Availability: Apr-2009

Tested by: Sun Microsystems

Software Availability: Nov-2008

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

Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Fortran benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:

-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp2006 = 38.6

Sun Fire X2270 (Intel Xeon X5570 2.93GHz)

SPECfp_base2006 = 32.8

CPU2006 license: 6

Test date: Mar-2009

Test sponsor: Sun Microsystems

Hardware Availability: Apr-2009

Tested by: Sun Microsystems

Software Availability: Nov-2008

Peak Compiler Invocation

C benchmarks:

icc

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
 470.lbm: -DSPEC_CPU_LP64
 481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
 482.sphinx3: -DSPEC_CPU_LP64

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp2006 = 38.6

Sun Fire X2270 (Intel Xeon X5570 2.93GHz)

SPECfp_base2006 = 32.8

CPU2006 license: 6

Test sponsor: Sun Microsystems

Tested by: Sun Microsystems

Test date: Mar-2009

Hardware Availability: Apr-2009

Software Availability: Nov-2008

Peak Optimization Flags (Continued)

444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-fno-alias -auto-ilp32

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

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

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

Fortran benchmarks:

410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch
-parallel

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

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
-unroll2 -Ob0 -opt-prefetch -parallel

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

Benchmarks using both Fortran and C:

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

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

454.calculix: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Sun Microsystems

SPECfp2006 = 38.6

Sun Fire X2270 (Intel Xeon X5570 2.93GHz)

SPECfp_base2006 = 32.8

CPU2006 license: 6

Test date: Mar-2009

Test sponsor: Sun Microsystems

Hardware Availability: Apr-2009

Tested by: Sun Microsystems

Software Availability: Nov-2008

Peak Optimization Flags (Continued)

481.wrf: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch
-parallel -auto-ilp32

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.20090710.09.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.20090710.09.xml>

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 02:05:44 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 28 April 2009.