



SPEC[®] CFP2006 Result

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Fujitsu

SPECfp[®]2006 = 46.4

PRIMERGY BX920 S2, Intel Xeon X5667, 3.06 GHz

SPECfp_base2006 = 43.1

CPU2006 license: 19

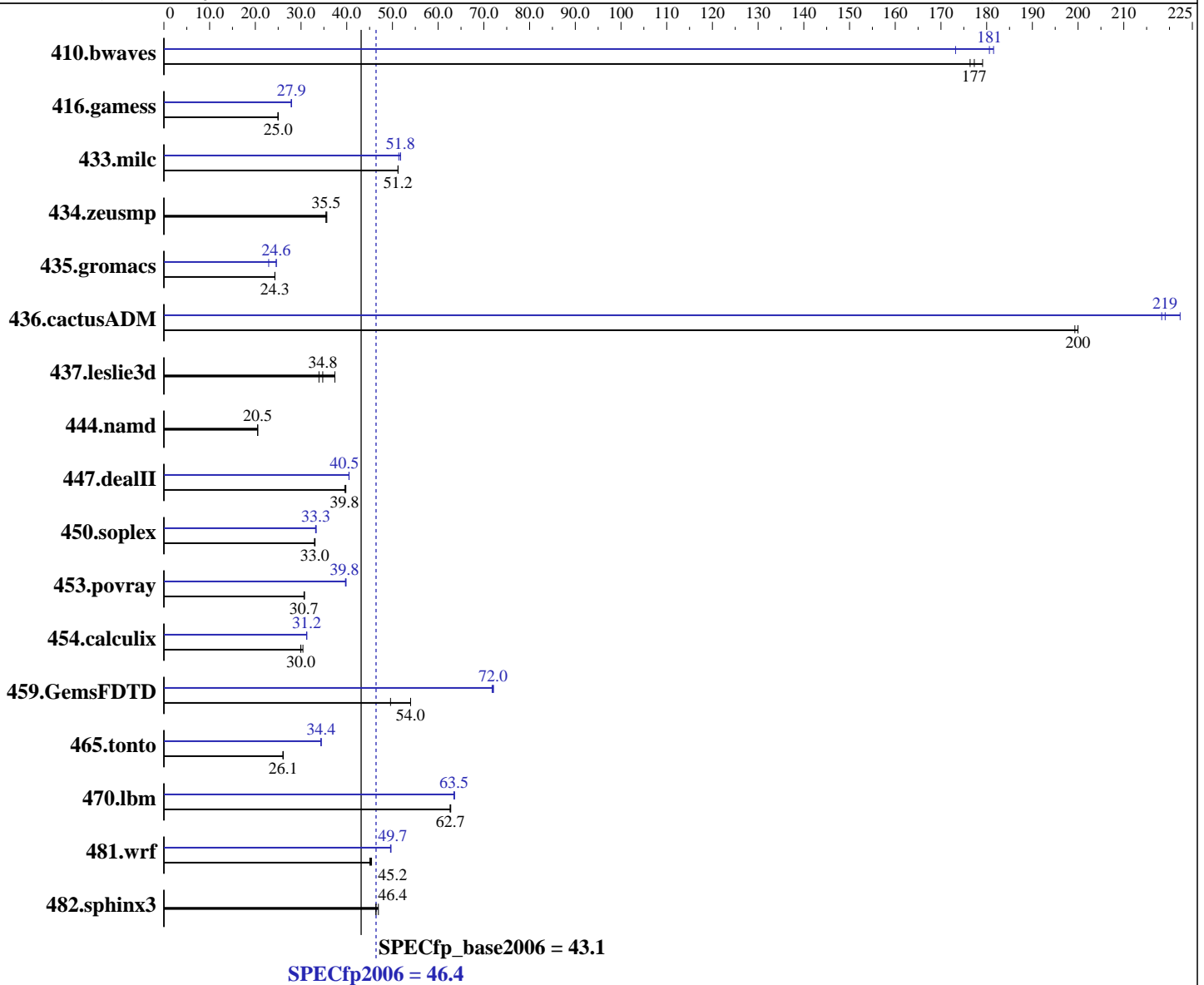
Test date: Jul-2010

Test sponsor: Fujitsu

Hardware Availability: Apr-2010

Tested by: Fujitsu

Software Availability: Jan-2010



Hardware

CPU Name: Intel Xeon X5667
 CPU Characteristics: Intel Turbo Boost Technology up to 3.46 GHz
 CPU MHz: 3067
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core

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Software

Operating System: SUSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-default
 Compiler: Intel C++ and Fortran Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20091130 Package ID: l_cproc_p_11.1.064, l_cprof_p_11.1.064
 Auto Parallel: Yes
 File System: ext3
 System State: Run level 3 (multi-user)

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L3 Cache: 12 MB I+D on chip per chip
Other Cache: None
Memory: 48 GB (6x8 GB PC3-10600R, 2 rank, CL9-9-9, ECC)
Disk Subsystem: 1 x SATA, 160 GB, 5400 RPM
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	<u>76.7</u>	<u>177</u>	77.0	176	75.9	179	<u>75.2</u>	<u>181</u>	78.5	173	74.9	182
416.gamess	783	25.0	785	25.0	<u>784</u>	<u>25.0</u>	<u>702</u>	<u>27.9</u>	701	27.9	703	27.9
433.milc	179	51.2	179	51.2	<u>179</u>	<u>51.2</u>	<u>177</u>	<u>51.8</u>	179	51.4	177	51.8
434.zeusmp	255	35.6	<u>256</u>	<u>35.5</u>	256	35.5	255	35.6	<u>256</u>	<u>35.5</u>	256	35.5
435.gromacs	294	24.3	<u>294</u>	<u>24.3</u>	294	24.3	311	22.9	290	24.6	<u>291</u>	<u>24.6</u>
436.cactusADM	59.8	200	60.0	199	<u>59.8</u>	<u>200</u>	53.7	222	54.7	218	<u>54.6</u>	<u>219</u>
437.leslie3d	251	37.4	<u>270</u>	<u>34.8</u>	277	33.9	251	37.4	<u>270</u>	<u>34.8</u>	277	33.9
444.namd	391	20.5	391	20.5	<u>391</u>	<u>20.5</u>	391	20.5	391	20.5	<u>391</u>	<u>20.5</u>
447.dealII	289	39.6	<u>287</u>	<u>39.8</u>	287	39.8	<u>282</u>	<u>40.5</u>	283	40.5	282	40.5
450.soplex	252	33.1	<u>253</u>	<u>33.0</u>	253	33.0	<u>251</u>	<u>33.3</u>	251	33.2	250	33.3
453.povray	174	30.7	173	30.8	<u>173</u>	<u>30.7</u>	133	39.9	134	39.7	<u>134</u>	<u>39.8</u>
454.calculix	271	30.4	276	29.9	<u>275</u>	<u>30.0</u>	<u>264</u>	<u>31.2</u>	264	31.2	264	31.3
459.GemsFDTD	<u>197</u>	<u>54.0</u>	197	54.0	214	49.6	<u>147</u>	<u>72.0</u>	147	72.1	148	71.8
465.tonto	<u>377</u>	<u>26.1</u>	378	26.0	377	26.1	286	34.4	286	34.3	<u>286</u>	<u>34.4</u>
470.lbm	219	62.8	<u>219</u>	<u>62.7</u>	219	62.6	216	63.6	<u>216</u>	<u>63.5</u>	217	63.4
481.wrf	<u>247</u>	<u>45.2</u>	248	45.0	246	45.4	<u>225</u>	<u>49.7</u>	225	49.6	225	49.7
482.sphinx3	<u>420</u>	<u>46.4</u>	420	46.4	415	46.9	<u>420</u>	<u>46.4</u>	420	46.4	415	46.9

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

BIOS configuration:
Data Reuse Optimization = Disable
Intel HT Technology = Disable
Performance/Power Setting = Traditional



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General Notes

OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter
KMP_STACKSIZE set to 200M
For information about Fujitsu please visit: <http://www.fujitsu.com>
Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502

Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

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.deall: -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

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Base Optimization Flags (Continued)

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

Peak Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: -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)
-ansi-alias

470.lbm: -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)
-parallel -ansi-alias -auto-ilp32

482.sphinx3: basepeak = yes

C++ benchmarks:

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Peak Optimization Flags (Continued)

444.namd: basepeak = yes

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- -auto-ilp32

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 -auto-ilp32

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)
-inline-calloc -opt-malloc-options=3 -auto -unroll4

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

481.wrf: Same as 454.calculix



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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-ic11.1-linux64-revE.20100330.02.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100330.02.xml>

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Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 10:15:18 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 14 September 2010.