



SPEC® CFP2006 Result

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ACTION S.A.

SPECfp®_rate2006 = 65.0

ACTINA SOLAR 200 X3 (Intel Xeon L5609)

SPECfp_rate_base2006 = 63.0

CPU2006 license: 9008

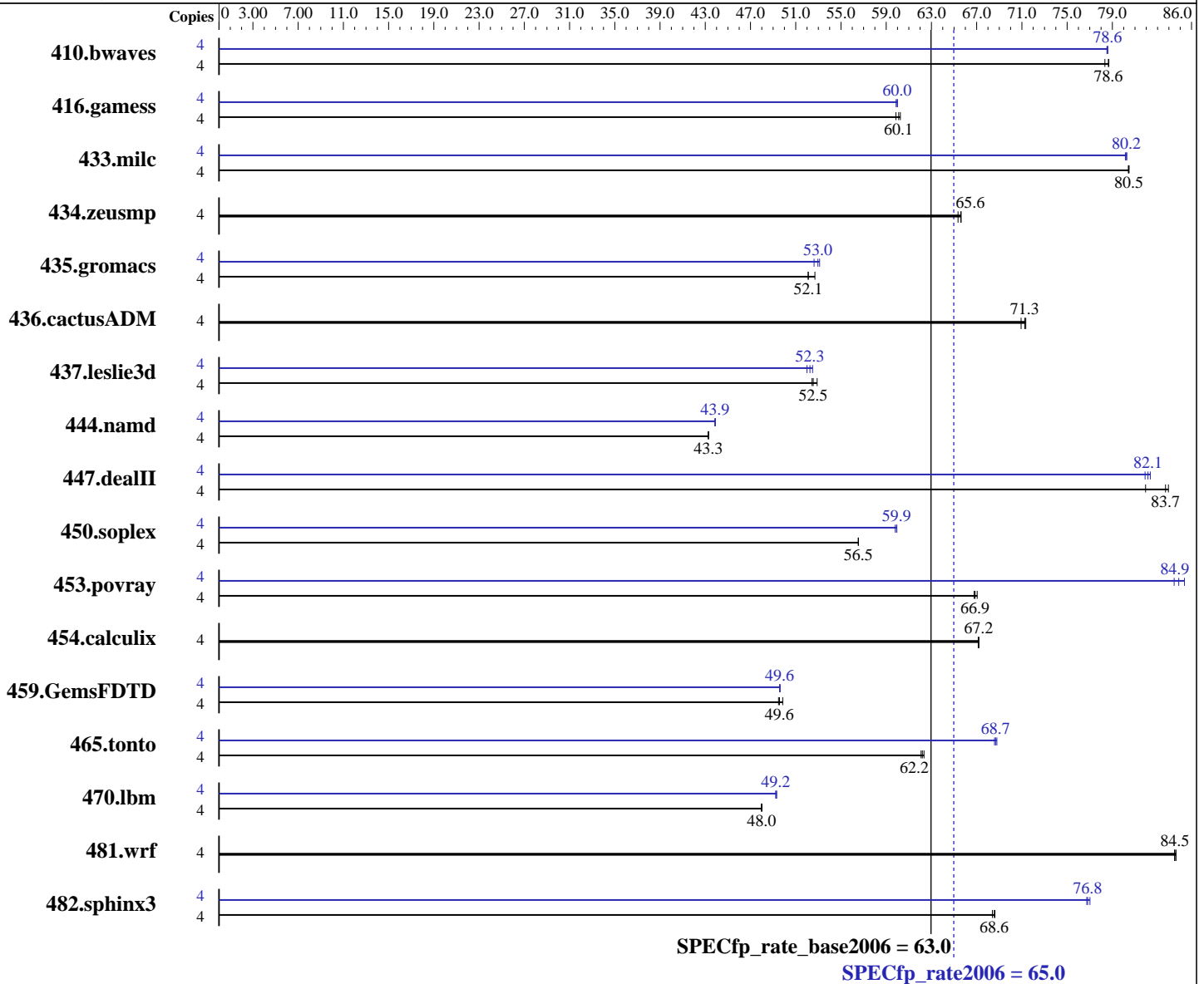
Test sponsor: ACTION S.A.

Tested by: ACTION S.A.

Test date: May-2010

Hardware Availability: Apr-2010

Software Availability: Jan-2010



Hardware

CPU Name: Intel Xeon L5609
 CPU Characteristics:
 CPU MHz: 1866
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 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: No
 File System: ReiserFS
 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: 24 GB (6 x 4 GB, PC3-10600R, CL7, ECC)
Disk Subsystem: 1x 500 GB SATA, 7200 RPM
Other Hardware: None

Base Pointers: 64-bit
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	694	78.3	<u>691</u>	<u>78.6</u>	691	78.7	4	<u>692</u>	<u>78.6</u>	692	78.6	692	78.5
416.gamess	4	1308	59.9	1300	60.3	<u>1303</u>	<u>60.1</u>	4	<u>1306</u>	<u>60.0</u>	1308	59.9	1305	60.0
433.milc	4	456	80.5	457	80.4	<u>456</u>	<u>80.5</u>	4	458	80.1	457	80.3	<u>458</u>	<u>80.2</u>
434.zeusmp	4	<u>555</u>	<u>65.6</u>	555	65.6	557	65.4	4	<u>555</u>	<u>65.6</u>	555	65.6	557	65.4
435.gromacs	4	542	52.7	<u>548</u>	<u>52.1</u>	548	52.1	4	<u>539</u>	<u>53.0</u>	538	53.1	543	52.6
436.cactusADM	4	670	71.3	674	70.9	<u>671</u>	<u>71.3</u>	4	670	71.3	674	70.9	<u>671</u>	<u>71.3</u>
437.leslie3d	4	711	52.9	<u>716</u>	<u>52.5</u>	717	52.4	4	723	52.0	716	52.5	<u>720</u>	<u>52.3</u>
444.namd	4	<u>741</u>	<u>43.3</u>	741	43.3	742	43.3	4	731	43.9	731	43.9	<u>731</u>	<u>43.9</u>
447.dealII	4	<u>547</u>	<u>83.7</u>	558	81.9	545	84.0	4	559	81.9	556	82.4	<u>557</u>	<u>82.1</u>
450.soplex	4	590	56.5	590	56.5	<u>590</u>	<u>56.5</u>	4	557	59.9	558	59.8	<u>557</u>	<u>59.9</u>
453.povray	4	319	66.8	317	67.0	<u>318</u>	<u>66.9</u>	4	<u>251</u>	<u>84.9</u>	249	85.4	252	84.5
454.calculix	4	491	67.2	<u>491</u>	<u>67.2</u>	492	67.1	4	491	67.2	<u>491</u>	<u>67.2</u>	492	67.1
459.GemsFDTD	4	851	49.8	858	49.5	<u>856</u>	<u>49.6</u>	4	855	49.6	<u>856</u>	<u>49.6</u>	856	49.6
465.tonto	4	631	62.3	634	62.1	<u>633</u>	<u>62.2</u>	4	572	68.8	574	68.6	<u>573</u>	<u>68.7</u>
470.lbm	4	1145	48.0	<u>1145</u>	<u>48.0</u>	1146	48.0	4	1114	49.3	<u>1116</u>	<u>49.2</u>	1116	49.2
481.wrf	4	<u>529</u>	<u>84.5</u>	529	84.5	528	84.6	4	<u>529</u>	<u>84.5</u>	529	84.5	528	84.6
482.sphinx3	4	<u>1137</u>	<u>68.6</u>	1136	68.6	1140	68.4	4	1016	76.7	<u>1015</u>	<u>76.8</u>	1012	77.0

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.
numactl was used to bind copies to the cores

Base Compiler Invocation

C benchmarks:
icc -m64
C++ benchmarks:
icpc -m64

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Base Compiler Invocation (Continued)

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.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

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static

Fortran benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static

Benchmarks using both Fortran and C:

-xSSE4.2 -ipo -O3 -no-prec-div -static

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

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Peak Compiler Invocation (Continued)

482.sphinx3: `icc -m32`

C++ benchmarks (except as noted below):

`icpc -m64`

450.soplex: `icpc -m32`

Fortran benchmarks:

`ifort -m64`

Benchmarks using both Fortran and C:

`icc -m64 ifort -m64`

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`

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)
 -fno-alias -opt-prefetch`

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)
 -opt-malloc-options=3 -ansi-alias -auto-ilp32`

482.sphinx3: `-xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2`

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Peak Optimization Flags (Continued)

C++ benchmarks:

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.dealIII: -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-

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

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: -xSSE4.2 -ipo -O3 -no-prec-div -static

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

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 -inline-calloc -opt-malloc-options=3

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: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes



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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.20100316.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.20100316.xml>

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

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