



SPEC® CFP2006 Result

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Dell Inc.

SPECfp®_rate2006 = 40.0

PowerEdge M600 (Intel Xeon E5205, 1.86GHz)

SPECfp_rate_base2006 = 38.3

CPU2006 license: 55

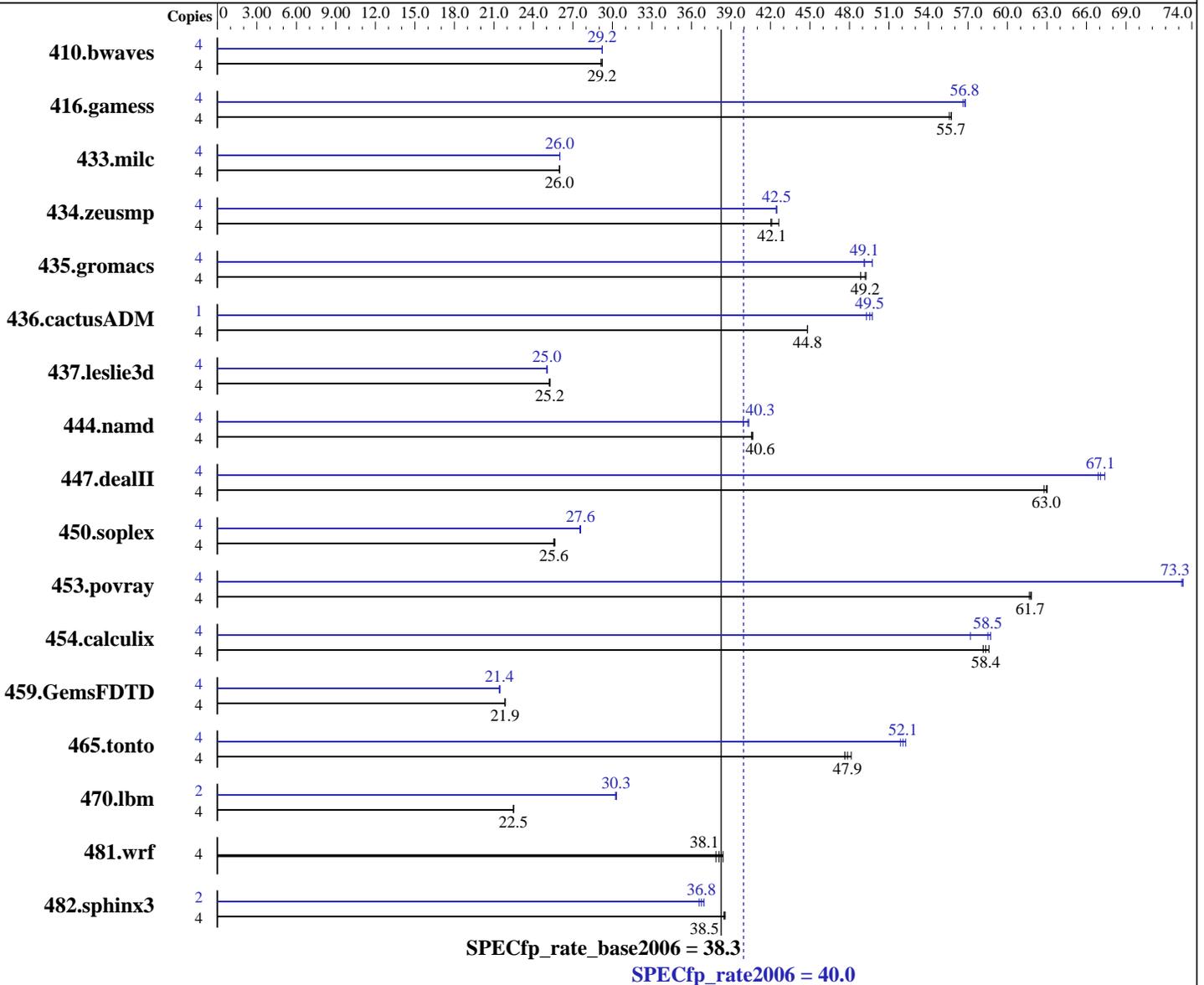
Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Sep-2008

Hardware Availability: Jan-2008

Software Availability: Nov-2008



Hardware

CPU Name: Intel Xeon E5205
 CPU Characteristics:
 CPU MHz: 1866
 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: ReiserFS
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit

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L3 Cache: None
Other Cache: None
Memory: 16 GB (4 x 4 GB 667 MHz ECC CL5 FB-DIMM)
Disk Subsystem: 1 x 80 GB 5400 RPM SATA
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	1866	29.1	1861	29.2	<u>1861</u>	<u>29.2</u>	4	1860	29.2	<u>1860</u>	<u>29.2</u>	1860	29.2
416.gamess	4	1405	55.7	1409	55.6	<u>1405</u>	<u>55.7</u>	4	1379	56.8	<u>1380</u>	<u>56.8</u>	1383	56.6
433.milc	4	1413	26.0	<u>1413</u>	<u>26.0</u>	1413	26.0	4	1412	26.0	<u>1412</u>	<u>26.0</u>	1412	26.0
434.zeusmp	4	854	42.6	<u>865</u>	<u>42.1</u>	866	42.0	4	<u>857</u>	<u>42.5</u>	858	42.4	857	42.5
435.gromacs	4	585	48.9	580	49.3	<u>581</u>	<u>49.2</u>	4	<u>581</u>	<u>49.1</u>	581	49.1	574	49.7
436.cactusADM	4	1067	44.8	1067	44.8	<u>1067</u>	<u>44.8</u>	1	<u>241</u>	<u>49.5</u>	242	49.3	240	49.7
437.leslie3d	4	1492	25.2	<u>1489</u>	<u>25.2</u>	1488	25.3	4	<u>1502</u>	<u>25.0</u>	1502	25.0	1502	25.0
444.namd	4	<u>789</u>	<u>40.6</u>	789	40.7	791	40.6	4	<u>796</u>	<u>40.3</u>	803	39.9	795	40.4
447.dealII	4	729	62.8	726	63.0	<u>727</u>	<u>63.0</u>	4	<u>682</u>	<u>67.1</u>	679	67.4	684	66.9
450.soplex	4	<u>1305</u>	<u>25.6</u>	1306	25.6	1301	25.6	4	1212	27.5	<u>1210</u>	<u>27.6</u>	1209	27.6
453.povray	4	345	61.7	<u>345</u>	<u>61.7</u>	344	61.8	4	291	73.2	290	73.3	<u>290</u>	<u>73.3</u>
454.calculix	4	<u>566</u>	<u>58.4</u>	563	58.6	568	58.1	4	577	57.2	562	58.7	<u>564</u>	<u>58.5</u>
459.GemsFDTD	4	1945	21.8	<u>1942</u>	<u>21.9</u>	1942	21.9	4	<u>1980</u>	<u>21.4</u>	1977	21.5	1982	21.4
465.tonto	4	826	47.7	818	48.1	<u>822</u>	<u>47.9</u>	4	753	52.3	<u>756</u>	<u>52.1</u>	759	51.9
470.lbm	4	2445	22.5	<u>2444</u>	<u>22.5</u>	2444	22.5	2	907	30.3	<u>907</u>	<u>30.3</u>	909	30.2
481.wrf	4	<u>1173</u>	<u>38.1</u>	1180	37.9	1164	38.4	4	<u>1173</u>	<u>38.1</u>	1180	37.9	1164	38.4
482.sphinx3	4	2021	38.6	2026	38.5	<u>2025</u>	<u>38.5</u>	2	1055	37.0	<u>1061</u>	<u>36.8</u>	1065	36.6

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 was used to bind processes to cores except
for 436.cactusADM peak

Operating System Notes

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

General Notes

OMP_NUM_THREADS set to number of processors
KMP_AFFINITY set to "physical,0"
KMP_STACKSIZE set to 64M



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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:

-xSSE4.1 -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



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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
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
444.namd: -DSPEC_CPU_LP64
447.deallI: -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:

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Peak Optimization Flags (Continued)

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

447.dealIII: -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

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

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

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Peak Optimization Flags (Continued)

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.20090713.04.html>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.10.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.20090713.04.xml>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.10.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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