



SPEC® CFP2006 Result

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Dell Inc.

SPECfp®_rate2006 = 71.4

Dell Precision R5400 (Intel Xeon E5450, 3.00 GHz)

SPECfp_rate_base2006 = 67.5

CPU2006 license: 55

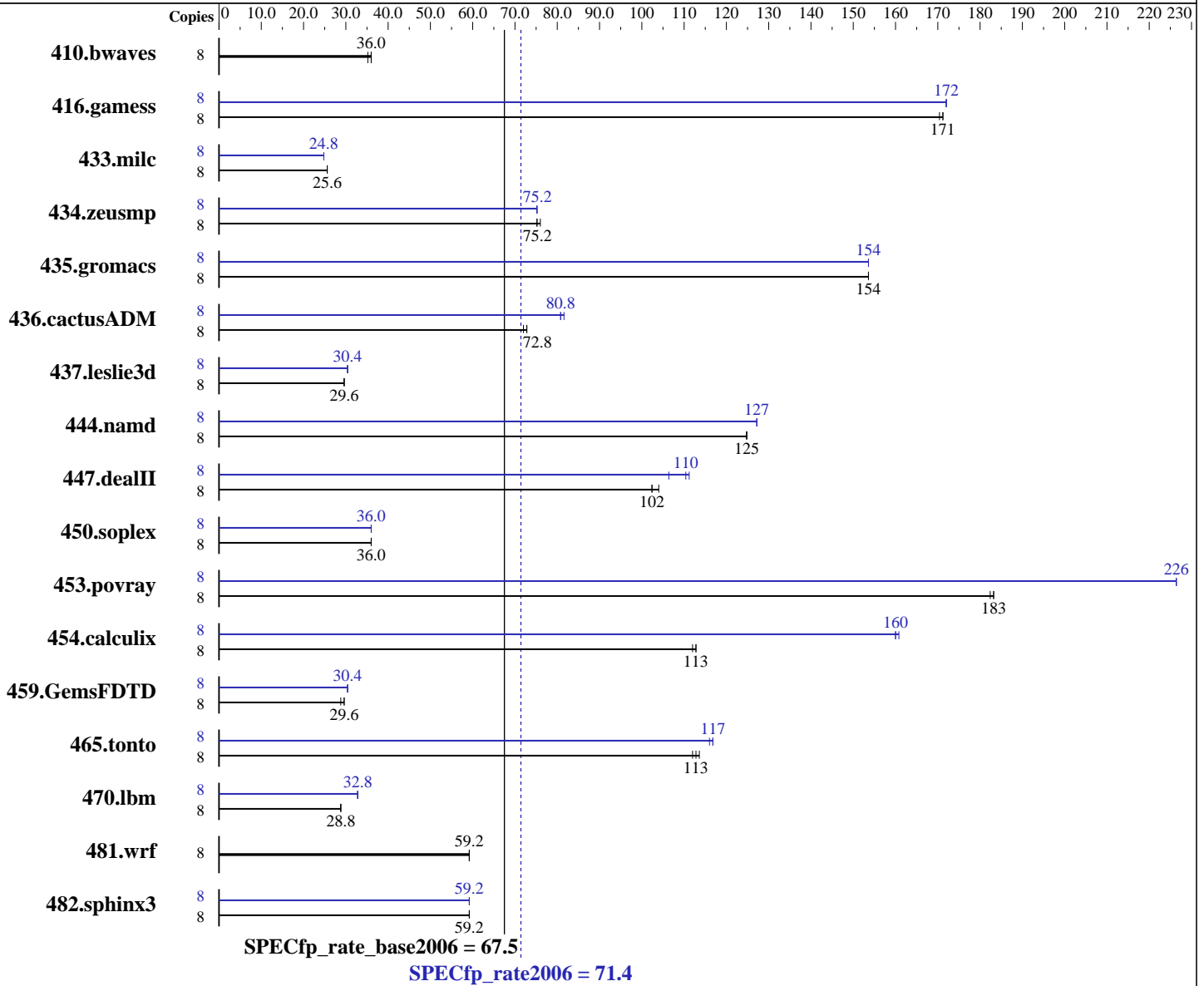
Test date: Jun-2008

Test sponsor: Dell Inc.

Hardware Availability: Jul-2008

Tested by: Dell Inc.

Software Availability: Mar-2008



Hardware

CPU Name: Intel Xeon E5450
 CPU Characteristics: 1333 MHz Bus Speed
 CPU MHz: 3000
 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: 12 MB I+D on chip per chip, 6 MB shared / 2 cores

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Software

Operating System: Windows Vista Ultimate (64-bit)
 Compiler: Intel C++ Compiler for Intel 64, Version 10.1
 Build 20080312 Package ID: w_cc_p_10.1.021
 Intel Visual Fortran Compiler for Intel 64,
 Version 10.1
 Build 20080312 Package ID: w_fc_p_10.1.021
 Microsoft Visual Studio 2005 SP1

Auto Parallel: No
 File System: NTFS

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L3 Cache: None
Other Cache: None
Memory: 16 GB (4x4 GB 667 MHz CL5 FB-DIMM)
Disk Subsystem: 2 x 320 GB SATA 7200 RPM, RAID0
Other Hardware: None

System State: Default
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: MicroQuill SmartHeap Library 8.1 for x64

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	3072	35.2	3014	36.0	3012	36.0	8	3072	35.2	3014	36.0	3012	36.0
416.gamess	8	917	170	917	171	916	171	8	912	172	910	172	910	172
433.milc	8	2881	25.6	2889	25.6	2893	25.6	8	2932	24.8	2932	24.8	2936	24.8
434.zeusmp	8	961	76.0	970	75.2	970	75.2	8	964	75.2	966	75.2	963	75.2
435.gromacs	8	372	154	372	154	372	154	8	373	154	373	154	373	154
436.cactusADM	8	1321	72.0	1314	72.8	1315	72.8	8	1181	80.8	1181	80.8	1173	81.6
437.leslie3d	8	2528	29.6	2524	29.6	2517	29.6	8	2499	30.4	2500	30.4	2504	30.4
444.namd	8	515	125	515	125	515	125	8	505	127	504	127	505	127
447.dealII	8	891	102	896	102	882	104	8	829	110	825	111	858	106
450.soplex	8	1841	36.0	1845	36.0	1838	36.0	8	1872	36.0	1837	36.0	1834	36.0
453.povray	8	233	183	233	183	233	182	8	188	226	188	226	188	226
454.calculix	8	587	112	586	113	584	113	8	411	161	413	160	413	160
459.GemsFDTD	8	2899	29.6	2919	28.8	2880	29.6	8	2794	30.4	2795	30.4	2776	30.4
465.tonto	8	697	113	705	112	694	114	8	672	117	677	116	675	117
470.lbm	8	3785	28.8	3782	28.8	3788	28.8	8	3324	32.8	3330	32.8	3323	32.8
481.wrf	8	1510	59.2	1516	59.2	1508	59.2	8	1510	59.2	1516	59.2	1508	59.2
482.sphinx3	8	2641	59.2	2646	59.2	2640	59.2	8	2638	59.2	2630	59.2	2634	59.2

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

General Notes

Binaries were built on Windows Vista Ultimate (64-bit)

Base Compiler Invocation

C benchmarks:
icl -Qstd=c99

C++ benchmarks:
icl

Fortran benchmarks:
ifort

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Base Compiler Invocation (Continued)

Benchmarks using both Fortran and C:

icl -Qstd=c99 ifort

Base Portability Flags

410.bwaves: -DSPEC_CPU_P64
 416.gamess: -DSPEC_CPU_P64
 433.milc: -DSPEC_CPU_P64
 434.zeusmp: -DSPEC_CPU_P64
 435.gromacs: -DSPEC_CPU_P64
 436.cactusADM: -DSPEC_CPU_P64 -Qlowercase /assume:underscore
 437.leslie3d: -DSPEC_CPU_P64
 444.namd: -DSPEC_CPU_P64 /TP
 447.dealII: -DSPEC_CPU_P64 -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
 450.soplex: -DSPEC_CPU_P64
 453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
 454.calculix: -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER -Qlowercase
 459.GemsFDTD: -DSPEC_CPU_P64
 465.tonto: -DSPEC_CPU_P64
 470.lbm: -DSPEC_CPU_P64
 481.wrf: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
 482.sphinx3: -DSPEC_CPU_P64

Base Optimization Flags

C benchmarks:
 -fast -Qauto-ilp32 /F512000000 -link /FORCE:MULTIPLE

C++ benchmarks:
 -fast -Qauto-ilp32 -Qcxx_features /F512000000 shlw64m.lib
 -link /FORCE:MULTIPLE

Fortran benchmarks:
 -fast -Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:
 -fast -Qauto-ilp32 /F1000000000 -link /FORCE:MULTIPLE

Peak Compiler Invocation

C benchmarks:
 icl -Qstd=c99

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Peak Compiler Invocation (Continued)

C++ benchmarks:
icl

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qstd=c99 ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qunroll2 -Oa /F512000000 -link /FORCE:MULTIPLE

470.lbm: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qunroll2 -Qscalar-rep- -Qprefetch /F512000000
-link /FORCE:MULTIPLE

482.sphinx3: -fast -Qauto-ilp32 -Qunroll2 /F512000000
-link /FORCE:MULTIPLE

C++ benchmarks:

444.namd: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Oa -Qcxx_features /F512000000 shlw64m.lib
-link /FORCE:MULTIPLE

447.dealII: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qunroll2 -Qprefetch -Qcxx_features /F512000000
shlw64m.lib -link /FORCE:MULTIPLE

450.soplex: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qcxx_features /F512000000 shlw64m.lib
-link /FORCE:MULTIPLE

453.povray: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qunroll4 -Qansi-alias -Qcxx_features /F512000000
shlw64m.lib -link /FORCE:MULTIPLE

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Peak Optimization Flags (Continued)

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep- /F1000000000
-link /FORCE:MULTIPLE

434.zeusmp: -Qprof_gen(pass 1) -Qprof_use(pass 2) -QxT -O2 -Qprec-div-
-Qunroll10 -Qscalar-rep- /F1000000000
-link /FORCE:MULTIPLE

437.leslie3d: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qprefetch /F1000000000 -link /FORCE:MULTIPLE

459.GemsFDTD: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qunroll2 -Ob0 -Qprefetch /F1000000000
-link /FORCE:MULTIPLE

465.tonto: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qunroll4 -Qauto /F1000000000
-link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:

435.gromacs: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Oa -Qprefetch /F1000000000
-link /FORCE:MULTIPLE

436.cactusADM: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qunroll2 -Qprefetch /F1000000000
-link /FORCE:MULTIPLE

454.calculix: -fast -Qauto-ilp32 -Qunroll-aggressive /F1000000000
-link /FORCE:MULTIPLE

481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/dell.ic10.1.windows.flags.20090713.01.html>

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

<http://www.spec.org/cpu2006/flags/dell.ic10.1.windows.flags.20090713.01.xml>



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