



SPEC[®] CFP2006 Result

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Dell Inc.

SPECfp[®]_rate2006 = 53.1

Dell Precision R5400 (Intel Xeon X5260, 3.33 GHz)

SPECfp_rate_base2006 = 49.0

CPU2006 license: 55

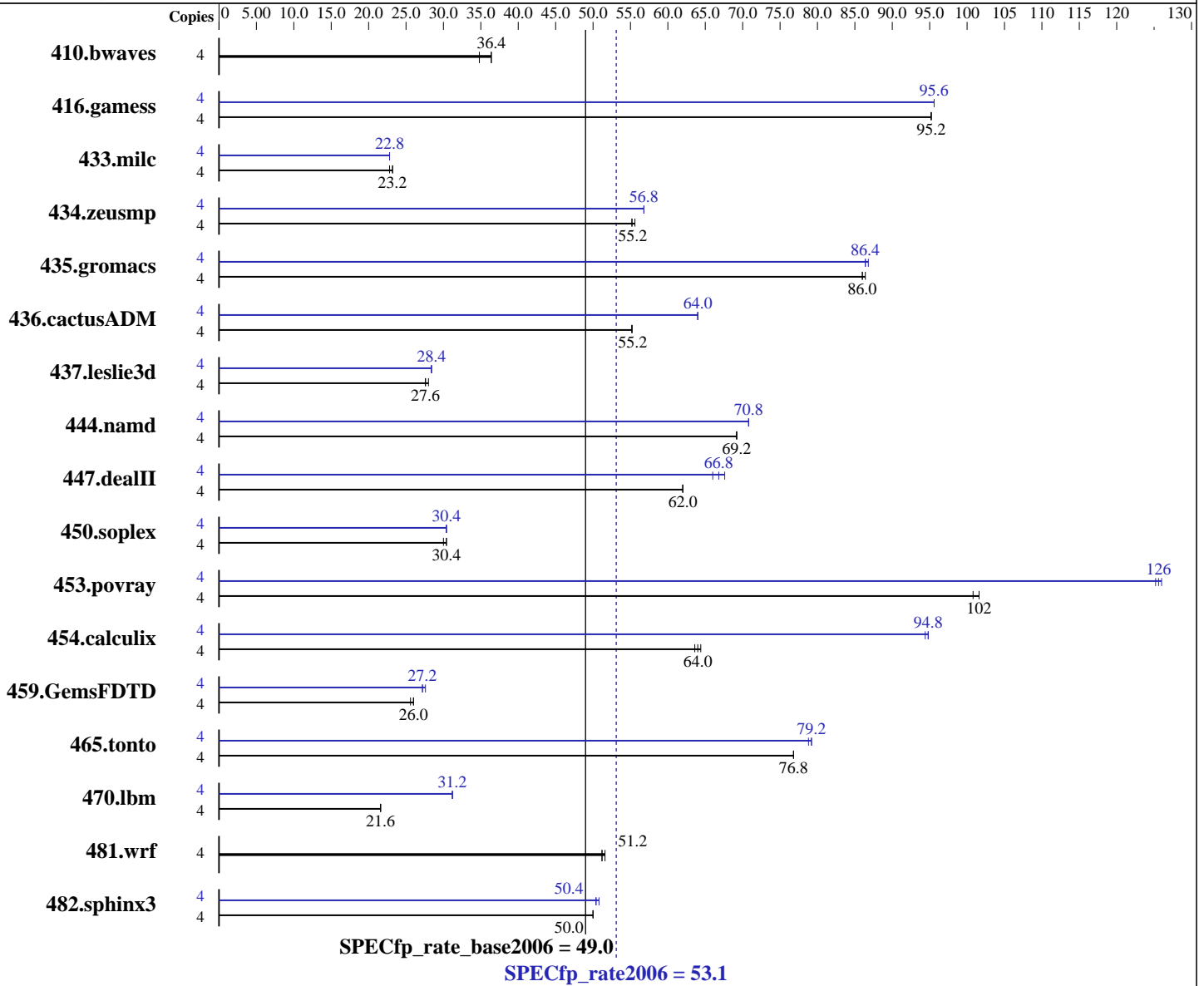
Test date: Jun-2008

Test sponsor: Dell Inc.

Hardware Availability: Jul-2008

Tested by: Dell Inc.

Software Availability: Mar-2008



Hardware

CPU Name: Intel Xeon X5260
 CPU Characteristics: 1333 MHz Bus Speed
 CPU MHz: 3333
 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: 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	4	1557	34.8	<u>1493</u>	<u>36.4</u>	1492	36.4	4	1557	34.8	<u>1493</u>	<u>36.4</u>	1492	36.4
416.gamess	4	824	95.2	824	95.2	<u>824</u>	<u>95.2</u>	4	819	95.6	<u>819</u>	<u>95.6</u>	819	95.6
433.milc	4	<u>1596</u>	<u>23.2</u>	1593	23.2	1599	22.8	4	1616	22.8	1608	22.8	<u>1611</u>	<u>22.8</u>
434.zeusmp	4	660	55.2	<u>659</u>	<u>55.2</u>	657	55.6	4	<u>641</u>	<u>56.8</u>	641	56.8	642	56.8
435.gromacs	4	<u>331</u>	<u>86.0</u>	332	86.0	331	86.4	4	330	86.8	330	86.4	<u>330</u>	<u>86.4</u>
436.cactusADM	4	864	55.2	<u>864</u>	<u>55.2</u>	865	55.2	4	<u>746</u>	<u>64.0</u>	747	64.0	745	64.0
437.leslie3d	4	1348	28.0	1365	27.6	<u>1359</u>	<u>27.6</u>	4	1327	28.4	1322	28.4	<u>1323</u>	<u>28.4</u>
444.namd	4	464	69.2	463	69.2	<u>463</u>	<u>69.2</u>	4	454	70.8	453	70.8	<u>454</u>	<u>70.8</u>
447.dealII	4	<u>736</u>	<u>62.0</u>	739	62.0	736	62.0	4	692	66.0	<u>686</u>	<u>66.8</u>	677	67.6
450.soplex	4	1097	30.4	1107	30.0	<u>1104</u>	<u>30.4</u>	4	<u>1101</u>	<u>30.4</u>	1102	30.4	1090	30.4
453.povray	4	211	101	210	102	<u>210</u>	<u>102</u>	4	170	125	<u>169</u>	<u>126</u>	169	126
454.calculix	4	<u>517</u>	<u>64.0</u>	514	64.4	518	63.6	4	<u>349</u>	<u>94.8</u>	348	94.8	349	94.4
459.GemsFDTD	4	1650	25.6	1643	26.0	<u>1644</u>	<u>26.0</u>	4	<u>1554</u>	<u>27.2</u>	1567	27.2	1545	27.6
465.tonto	4	513	76.8	<u>513</u>	<u>76.8</u>	514	76.8	4	500	78.8	<u>497</u>	<u>79.2</u>	496	79.2
470.lbm	4	<u>2565</u>	<u>21.6</u>	2566	21.6	2565	21.6	4	1752	31.2	<u>1766</u>	<u>31.2</u>	1766	31.2
481.wrf	4	869	51.6	871	51.2	<u>870</u>	<u>51.2</u>	4	869	51.6	871	51.2	<u>870</u>	<u>51.2</u>
482.sphinx3	4	1557	50.0	<u>1557</u>	<u>50.0</u>	1559	50.0	4	<u>1546</u>	<u>50.4</u>	1547	50.4	1541	50.8

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)
BIOS Settings
Adjacent Cache Line Prefetch set to ON

Base Compiler Invocation

C benchmarks:
icl -Qstd=c99

C++ benchmarks:
icl

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Base Compiler Invocation (Continued)

Fortran benchmarks:
ifort

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



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Peak Compiler Invocation

C benchmarks:
icl -Qstd=c99

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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