SPEC® CFP2006 Result

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Dell Inc.

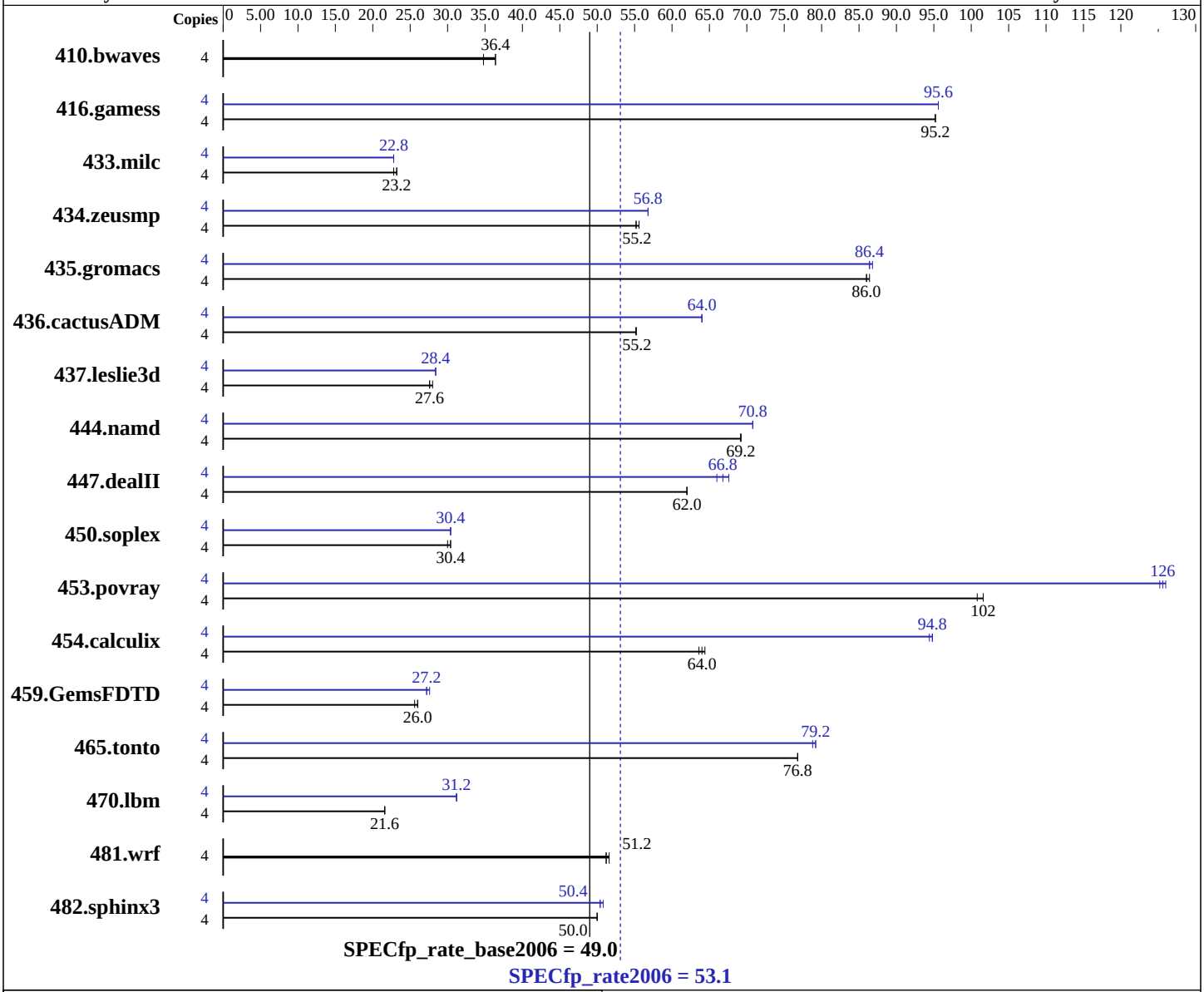
Dell Precision R5400 (Intel Xeon X5260, 3.33 GHz)

SPECfp®_rate2006 = 53.1

SPECfp_rate_base2006 = 49.0

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Jun-2008
Hardware Availability: Jul-2008
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	**1493**	**36.4**	1492	36.4	4	1557	34.8	**1493**	**36.4**	1492	36.4
416.gamess	4	824	95.2	824	95.2	**824**	**95.2**	4	819	95.6	**819**	**95.6**	819	95.6
433.milc	4	**1596**	**23.2**	1593	23.2	1599	22.8	4	1616	22.8	1608	22.8	**1611**	**22.8**
434.zeusmp	4	660	55.2	**659**	**55.2**	657	55.6	4	**641**	**56.8**	641	56.8	642	56.8
435.gromacs	4	**331**	**86.0**	332	86.0	331	86.4	4	330	86.8	330	86.4	**330**	**86.4**
436.cactusADM	4	864	55.2	**864**	**55.2**	865	55.2	4	**746**	**64.0**	747	64.0	745	64.0
437.leslie3d	4	1348	28.0	1365	27.6	**1359**	**27.6**	4	1327	28.4	1322	28.4	**1323**	**28.4**
444.namd	4	464	69.2	463	69.2	**463**	**69.2**	4	454	70.8	453	70.8	**454**	**70.8**
447.dealII	4	**736**	**62.0**	739	62.0	736	62.0	4	692	66.0	**686**	**66.8**	677	67.6
450.soplex	4	1097	30.4	1107	30.0	**1104**	**30.4**	4	**1101**	**30.4**	1102	30.4	1090	30.4
453.povray	4	211	101	210	102	**210**	**102**	4	170	125	**169**	**126**	169	126
454.calculix	4	**517**	**64.0**	514	64.4	518	63.6	4	**349**	**94.8**	348	94.8	349	94.4
459.GemsFDTD	4	1650	25.6	1643	26.0	**1644**	**26.0**	4	**1554**	**27.2**	1567	27.2	1545	27.6
465.tonto	4	513	76.8	**513**	**76.8**	514	76.8	4	500	78.8	**497**	**79.2**	496	79.2
470.lbm	4	**2565**	**21.6**	2566	21.6	2565	21.6	4	1752	31.2	**1766**	**31.2**	1766	31.2
481.wrf	4	869	51.6	871	51.2	**870**	**51.2**	4	869	51.6	871	51.2	**870**	**51.2**
482.sphinx3	4	1557	50.0	**1557**	**50.0**	1559	50.0	4	**1546**	**50.4**	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

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- -Qunroll0 -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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