



SPEC® CFP2006 Result

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Dell Inc.

SPECfp®_rate2006 = 44.4

Dell Precision T3400 (Intel QX6850, 3.00 GHz)

SPECfp_rate_base2006 = 42.9

CPU2006 license: 55

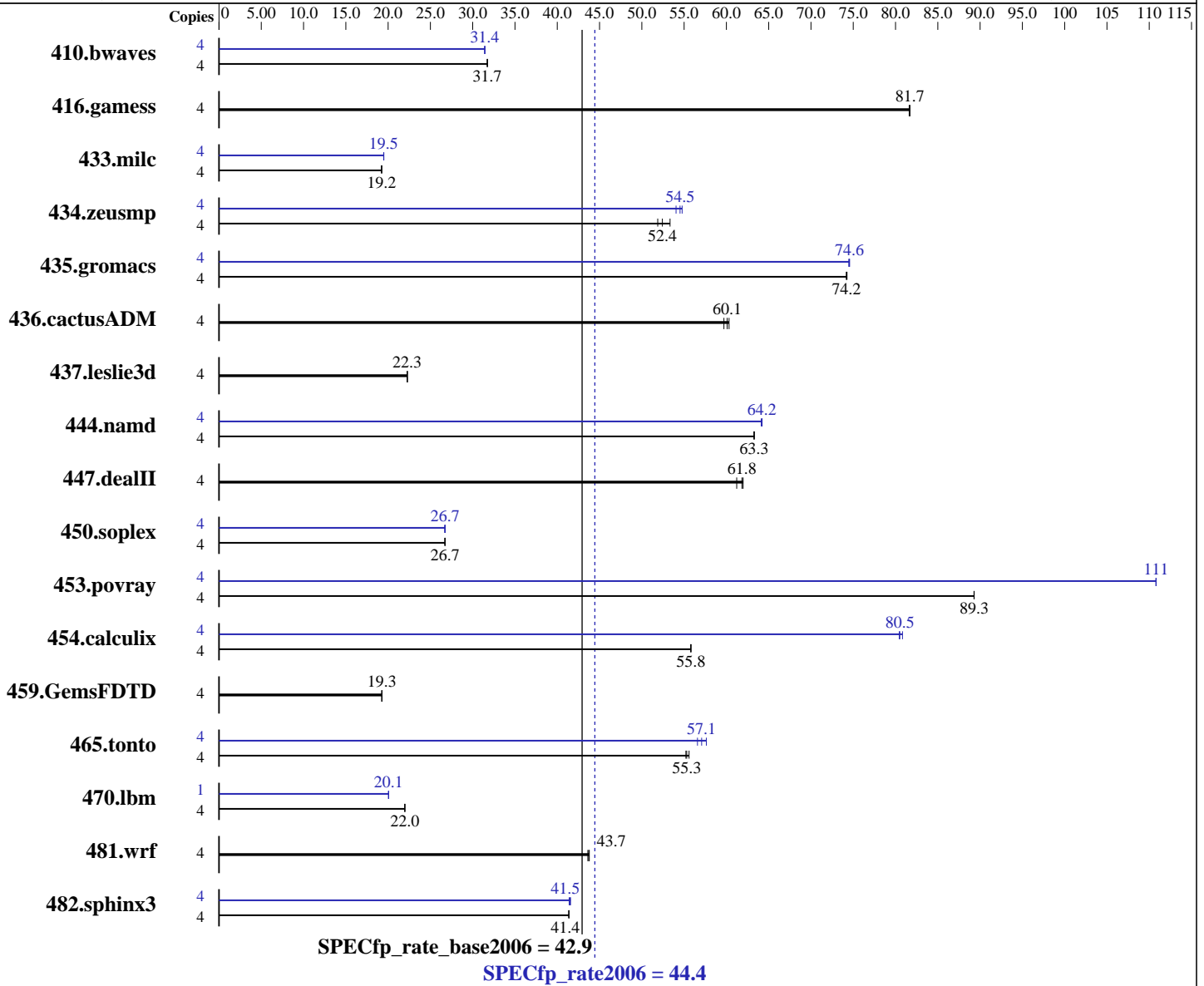
Test date: Dec-2007

Test sponsor: Dell Inc.

Hardware Availability: Oct-2007

Tested by: Dell Inc.

Software Availability: Nov-2007



Hardware

CPU Name: Intel Core 2 Extreme QX6850
 CPU Characteristics: 1333 MHz Bus Speed
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 CPU(s) orderable: 1 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 8 MB I+D on chip per chip, 4 MB shared / 2 cores

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Software

Operating System: Windows XP Professional x64 Edition SP2
 Compiler: Intel C++ Compiler for Intel 64, Version 10.1
 Build 20070809 Package ID: w_cc_p_10.1.011
 Intel Visual Fortran Compiler for Intel 64,
 Version 10.0
 Build 20070809 Package ID: w_fc_p_10.1.011
 Microsoft Visual Studio 2005 SP1

Auto Parallel: No
 File System: NTFS

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L3 Cache: None
Other Cache: None
Memory: 8 GB (4x2 GB 800 MHz ECC CL6 DDR2)
Disk Subsystem: 1 x 80 GB SATA 7200 RPM
Other Hardware: None

System State: Default
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: MicroQuill SmartHeap Library 8.0 for x64

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	1714	31.7	<u>1713</u>	<u>31.7</u>	1712	31.7	4	1728	31.5	1731	31.4	<u>1730</u>	<u>31.4</u>
416.gamess	4	959	81.7	960	81.6	<u>959</u>	<u>81.7</u>	4	959	81.7	960	81.6	<u>959</u>	<u>81.7</u>
433.milc	4	<u>1909</u>	<u>19.2</u>	1911	19.2	1909	19.2	4	1886	19.5	1884	19.5	<u>1885</u>	<u>19.5</u>
434.zeusmp	4	682	53.3	702	51.9	<u>694</u>	<u>52.4</u>	4	674	54.0	665	54.8	<u>668</u>	<u>54.5</u>
435.gromacs	4	385	74.2	385	74.3	<u>385</u>	<u>74.2</u>	4	384	74.5	<u>383</u>	<u>74.6</u>	383	74.6
436.cactusADM	4	793	60.3	801	59.7	<u>796</u>	<u>60.1</u>	4	793	60.3	801	59.7	<u>796</u>	<u>60.1</u>
437.leslie3d	4	<u>1689</u>	<u>22.3</u>	1689	22.3	1689	22.3	4	<u>1689</u>	<u>22.3</u>	1689	22.3	1689	22.3
444.namd	4	507	63.3	507	63.3	<u>507</u>	<u>63.3</u>	4	500	64.1	500	64.2	<u>500</u>	<u>64.2</u>
447.dealII	4	738	62.0	747	61.2	<u>740</u>	<u>61.8</u>	4	738	62.0	747	61.2	<u>740</u>	<u>61.8</u>
450.soplex	4	1250	26.7	1247	26.7	<u>1248</u>	<u>26.7</u>	4	1250	26.7	<u>1248</u>	<u>26.7</u>	1247	26.8
453.povray	4	238	89.3	<u>238</u>	<u>89.3</u>	238	89.3	4	<u>192</u>	<u>111</u>	192	111	192	111
454.calculix	4	<u>591</u>	<u>55.8</u>	591	55.8	592	55.8	4	<u>410</u>	<u>80.5</u>	410	80.4	408	80.8
459.GemsFDTD	4	2201	19.3	<u>2204</u>	<u>19.3</u>	2205	19.2	4	2201	19.3	<u>2204</u>	<u>19.3</u>	2205	19.2
465.tonto	4	713	55.2	708	55.6	<u>712</u>	<u>55.3</u>	4	696	56.6	<u>690</u>	<u>57.1</u>	683	57.6
470.lbm	4	2501	22.0	2501	22.0	<u>2501</u>	<u>22.0</u>	1	685	20.0	685	20.1	<u>685</u>	<u>20.1</u>
481.wrf	4	<u>1022</u>	<u>43.7</u>	1024	43.6	1020	43.8	4	<u>1022</u>	<u>43.7</u>	1024	43.6	1020	43.8
482.sphinx3	4	<u>1884</u>	<u>41.4</u>	1883	41.4	1885	41.3	4	1883	41.4	1875	41.6	<u>1878</u>	<u>41.5</u>

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 /F1000000000 shlw64m.lib
-link /FORCE:MULTIPLE

C++ benchmarks:
-fast -Qauto-ilp32 -Qcxx_features /F1000000000 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 /F1000000000 shlw64m.lib
          -link /FORCE:MULTIPLE
```

```
470.lbm: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
          -Qunroll2 -Qscalar-rep- -Qprefetch /F1000000000
          shlw64m.lib -link /FORCE:MULTIPLE
```

```
482.sphinx3: -fast -Qauto-ilp32 -Qunroll2 /F1000000000 shlw64m.lib
             -link /FORCE:MULTIPLE
```

C++ benchmarks:

```
444.namd: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
          -Oa -Qcxx_features /F1000000000 shlw64m.lib
          -link /FORCE:MULTIPLE
```

```
447.dealII: basepeak = yes
```

```
450.soplex: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
            -Qcxx_features /F1000000000 shlw64m.lib
            -link /FORCE:MULTIPLE
```

```
453.povray: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
            -Qunroll4 -Qansi-alias -Qcxx_features /F1000000000
            shlw64m.lib -link /FORCE:MULTIPLE
```

Fortran benchmarks:

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Peak Optimization Flags (Continued)

410.bwaves: -fast -Qauto-ilp32 -Qprefetch /F1000000000
-link /FORCE:MULTIPLE

416.gamess: basepeak = yes

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

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qunroll14 -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: basepeak = yes

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.20090714.01.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.20090714.01.xml>

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

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