SPEC® CFP2006 Result

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Dell Inc.

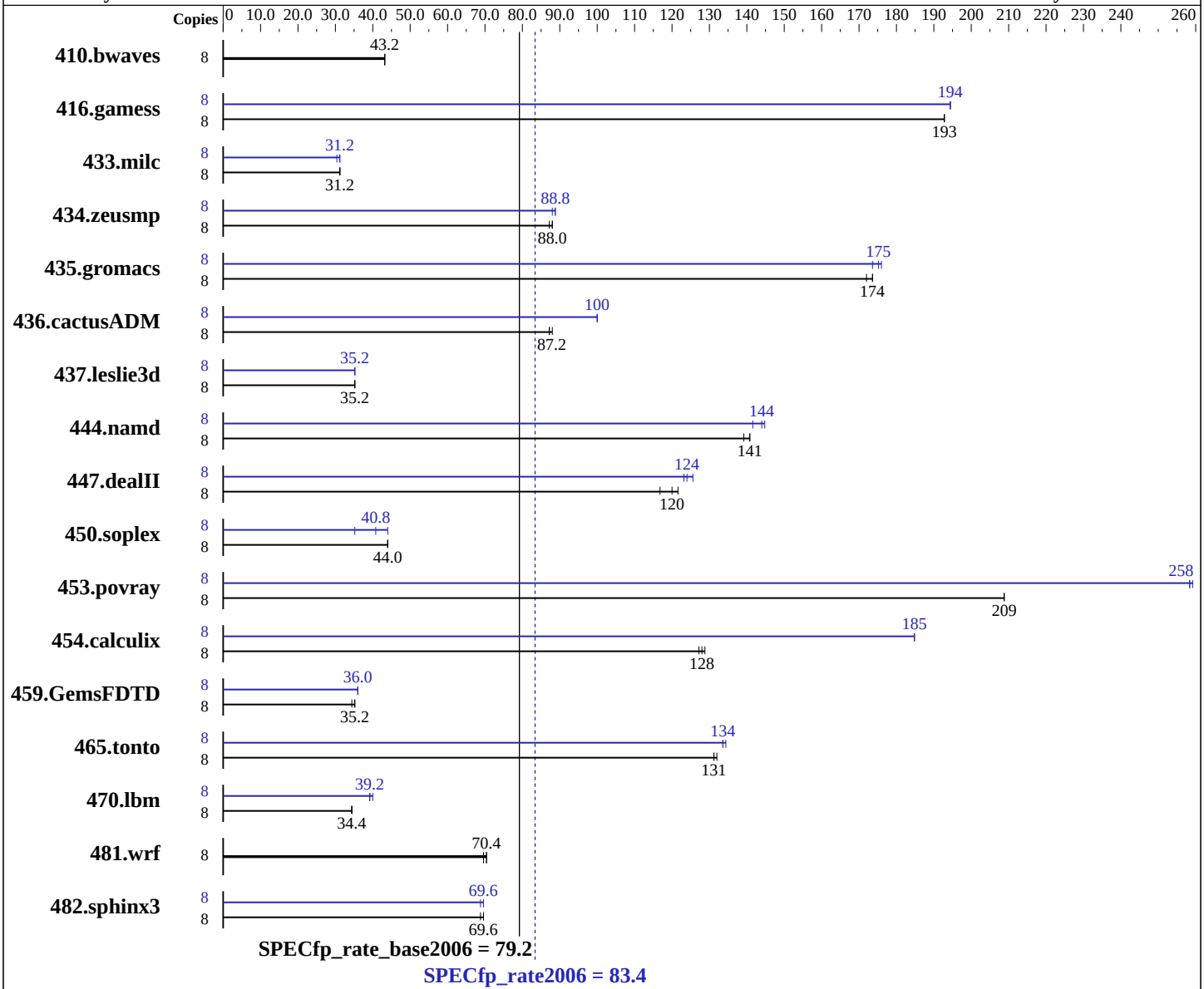
Dell Precision T7400 (Intel Xeon X5492, 3.40 GHz)

SPECfp®_rate2006 = 83.4

SPECfp_rate_base2006 = 79.2

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

Test date: Aug-2008
Hardware Availability: Sep-2008
Software Availability: Mar-2008



Hardware

CPU Name:	Intel Xeon X5492
CPU Characteristics:	1600 MHz Bus Speed
CPU MHz:	3400
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 Business SP1 (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 (8x2 GB 800 MHz CL5 FB-DIMM)
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 8.1 for x64

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	2505	43.2	2507	43.2	**2506**	**43.2**	8	2505	43.2	2507	43.2	**2506**	**43.2**
416.gamess	8	**812**	**193**	813	193	812	193	8	807	194	**807**	**194**	807	194
433.milc	8	2346	31.2	**2341**	**31.2**	2330	31.2	8	2370	31.2	2385	30.4	**2374**	**31.2**
434.zeusmp	8	828	88.0	**829**	**88.0**	838	87.2	8	**822**	**88.8**	820	88.8	828	88.0
435.gromacs	8	332	172	329	174	**329**	**174**	8	328	174	**326**	**175**	325	176
436.cactusADM	8	1091	88.0	**1091**	**87.2**	1092	87.2	8	957	100	**955**	**100**	955	100
437.leslie3d	8	2123	35.2	2126	35.2	**2126**	**35.2**	8	**2120**	**35.2**	2120	35.2	2119	35.2
444.namd	8	460	139	**455**	**141**	454	141	8	453	142	**445**	**144**	444	145
447.dealII	8	783	117	755	122	**761**	**120**	8	**740**	**124**	728	126	743	123
450.soplex	8	**1515**	**44.0**	1515	44.0	1516	44.0	8	1890	35.2	**1622**	**40.8**	1515	44.0
453.povray	8	204	209	204	209	**204**	**209**	8	165	258	164	259	**165**	**258**
454.calculix	8	**516**	**128**	512	129	520	127	8	**357**	**185**	356	185	357	185
459.GemsFDTD	8	2429	35.2	2443	34.4	**2429**	**35.2**	8	2359	36.0	**2340**	**36.0**	2339	36.0
465.tonto	8	**599**	**131**	601	131	596	132	8	586	134	590	134	**589**	**134**
470.lbm	8	**3167**	**34.4**	3171	34.4	3167	34.4	8	2782	39.2	2769	40.0	**2780**	**39.2**
481.wrf	8	1283	69.6	1275	70.4	**1276**	**70.4**	8	1283	69.6	1275	70.4	**1276**	**70.4**
482.sphinx3	8	2270	68.8	2240	69.6	**2246**	**69.6**	8	2261	68.8	2237	69.6	**2240**	**69.6**

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- -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.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.xml

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