



# SPEC® CFP2006 Result

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## Dell Inc.

### SPECfp®\_rate2006 = 83.4

### Dell Precision T7400 (Intel Xeon X5492, 3.40 GHz)

### SPECfp\_rate\_base2006 = 79.2

CPU2006 license: 55

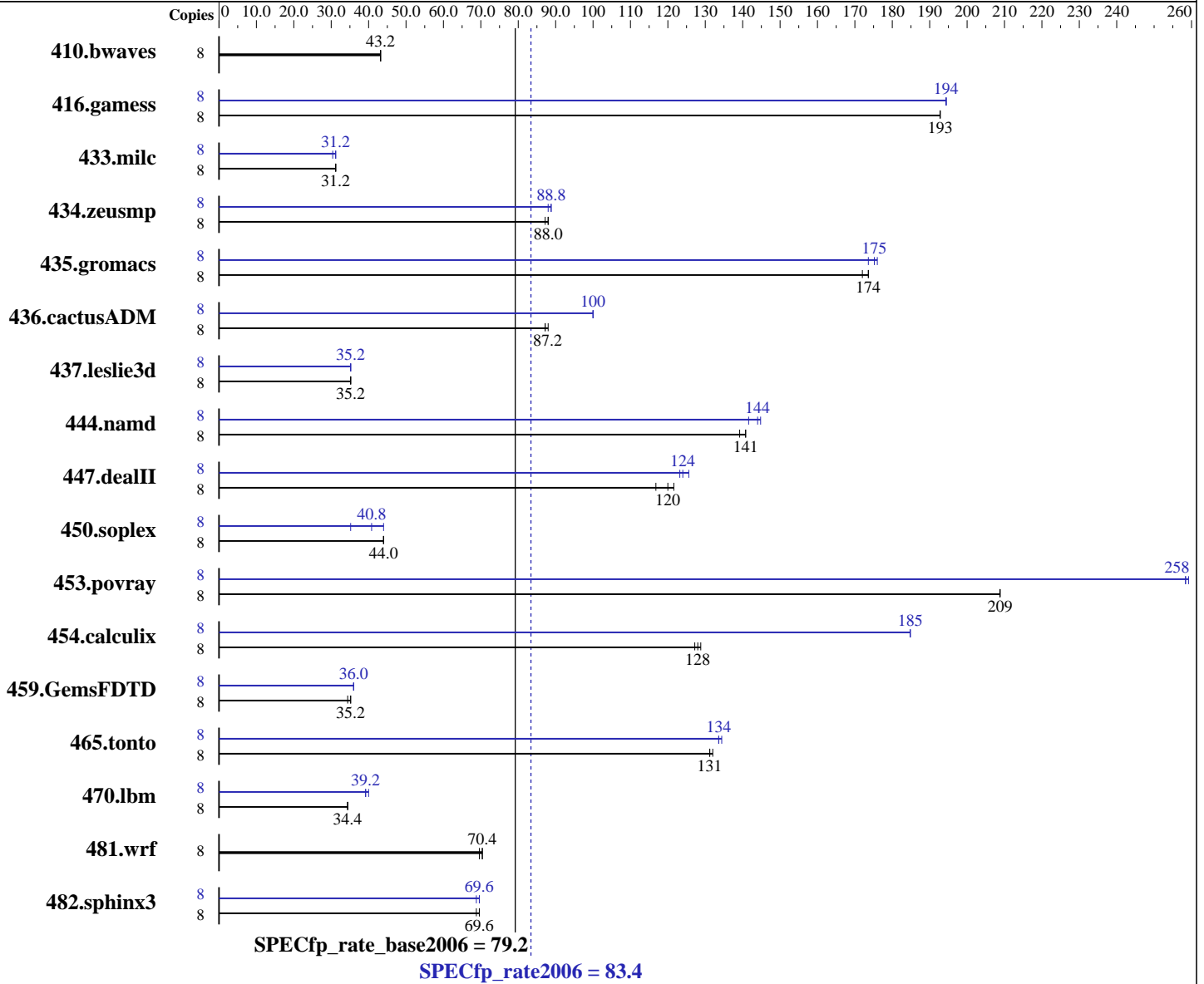
Test date: Aug-2008

Test sponsor: Dell Inc.

Hardware Availability: Sep-2008

Tested by: Dell Inc.

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

Continued on next page

#### 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

Continued on next page



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

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.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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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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