



# SPEC® CFP2006 Result

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Dell Inc.

SPECfp®\_rate2006 = 25.3

Dell Precision 390 (Intel X6800, 2.93 GHz)

SPECfp\_rate\_base2006 = 24.9

CPU2006 license: 55

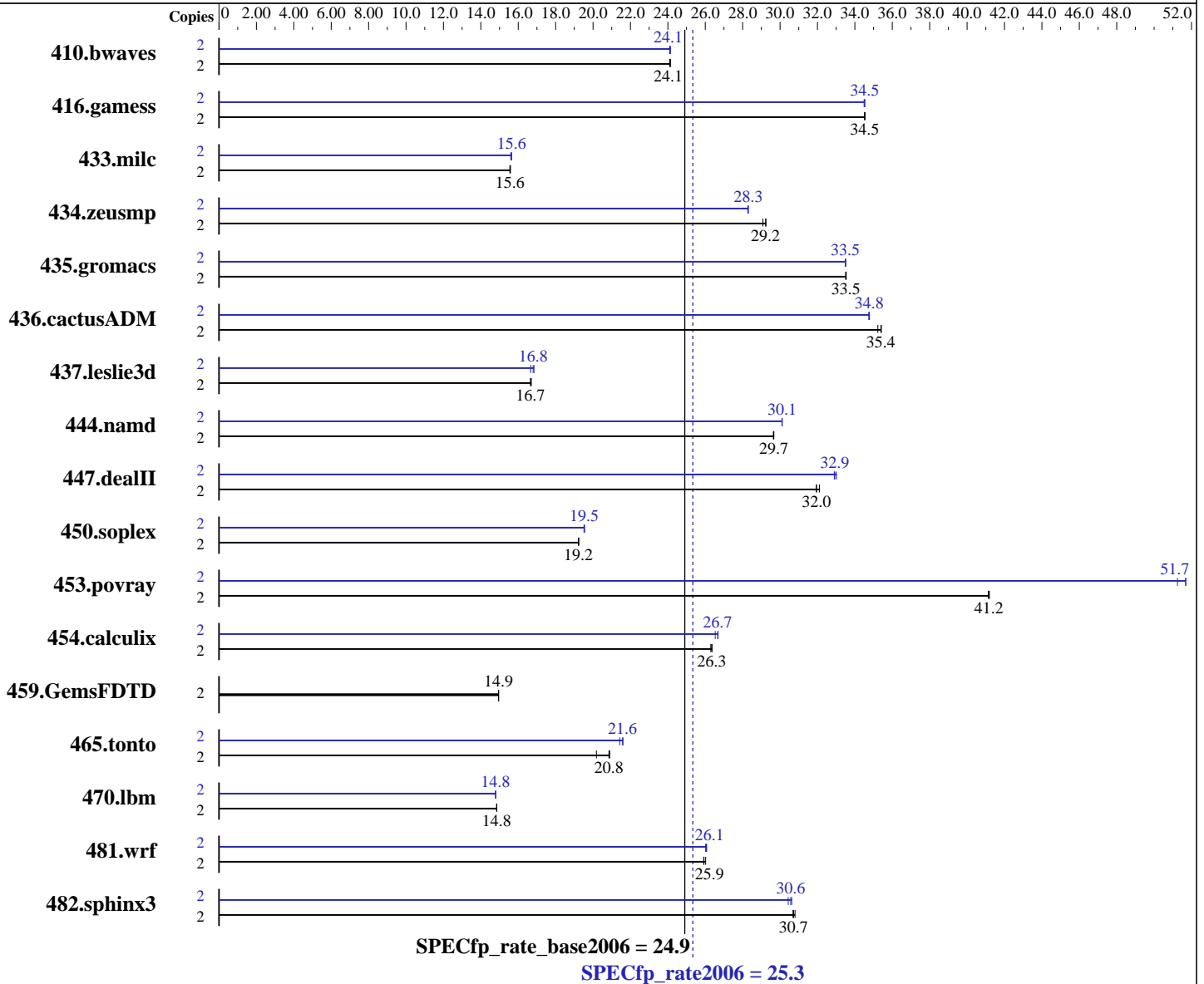
Test date: Dec-2006

Test sponsor: Dell Inc.

Hardware Availability: Jul-2006

Tested by: Dell Inc.

Software Availability: Nov-2006



### Hardware

CPU Name: Intel Core 2 Extreme X6800  
 CPU Characteristics: 1066 MHz System Bus  
 CPU MHz: 2933  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip  
 CPU(s) orderable: 1 chip  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 4 MB I+D on chip per chip

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### Software

Operating System: Windows XP Professional SP2  
 Compiler: Intel C++ Compiler 9.1 for IA32 (20061103Z)  
 Intel FORTRAN Compiler 9.1 for IA32 (20061103Z)  
 Microsoft Visual Studio 2005  
 MicroQuill SmartHeap Library 8.0  
 Auto Parallel: No  
 File System: NTFS  
 System State: Default  
 Base Pointers: 32-bit

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L3 Cache: None  
Other Cache: None  
Memory: 4 GB (4x1GB 667 MHz ECC CL5 DDR2 SDRAM)  
Disk Subsystem: 1 x 80 GB SATA 7200 RPM  
Other Hardware: None

Peak Pointers: 32-bit  
Other Software: None

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2	1128	24.1	1126	24.1	<u>1127</u>	<u>24.1</u>	2	1126	24.1	1128	24.1	<u>1128</u>	<u>24.1</u>
416.gamess	2	1135	34.5	<u>1134</u>	<u>34.5</u>	1134	34.5	2	<u>1134</u>	<u>34.5</u>	1135	34.5	1134	34.5
433.milc	2	1178	15.6	<u>1180</u>	<u>15.6</u>	1180	15.6	2	<u>1173</u>	<u>15.6</u>	1173	15.6	1177	15.6
434.zeusmp	2	626	29.1	<u>623</u>	<u>29.2</u>	622	29.2	2	643	28.3	644	28.3	<u>643</u>	<u>28.3</u>
435.gromacs	2	426	33.5	426	33.5	<u>426</u>	<u>33.5</u>	2	426	33.5	426	33.5	<u>426</u>	<u>33.5</u>
436.cactusADM	2	675	35.4	<u>675</u>	<u>35.4</u>	678	35.2	2	687	34.8	688	34.7	<u>688</u>	<u>34.8</u>
437.leslie3d	2	1129	16.7	1126	16.7	<u>1128</u>	<u>16.7</u>	2	<u>1119</u>	<u>16.8</u>	1116	16.8	1128	16.7
444.namd	2	<u>541</u>	<u>29.7</u>	541	29.6	541	29.7	2	533	30.1	533	30.1	<u>533</u>	<u>30.1</u>
447.dealII	2	716	31.9	<u>716</u>	<u>32.0</u>	713	32.1	2	<u>695</u>	<u>32.9</u>	695	32.9	693	33.0
450.soplex	2	867	19.2	<u>868</u>	<u>19.2</u>	868	19.2	2	<u>854</u>	<u>19.5</u>	853	19.5	855	19.5
453.povray	2	259	41.1	<u>258</u>	<u>41.2</u>	258	41.2	2	208	51.3	<u>206</u>	<u>51.7</u>	206	51.7
454.calculix	2	626	26.4	<u>626</u>	<u>26.3</u>	628	26.3	2	622	26.5	618	26.7	<u>619</u>	<u>26.7</u>
459.GemsFDTD	2	1420	14.9	1419	15.0	<u>1420</u>	<u>14.9</u>	2	1420	14.9	1419	15.0	<u>1420</u>	<u>14.9</u>
465.tonto	2	942	20.9	975	20.2	<u>944</u>	<u>20.8</u>	2	918	21.4	<u>912</u>	<u>21.6</u>	911	21.6
470.lbm	2	1850	14.9	1851	14.8	<u>1851</u>	<u>14.8</u>	2	1858	14.8	<u>1858</u>	<u>14.8</u>	1858	14.8
481.wrf	2	859	26.0	<u>861</u>	<u>25.9</u>	862	25.9	2	857	26.1	859	26.0	<u>857</u>	<u>26.1</u>
482.sphinx3	2	1270	30.7	<u>1269</u>	<u>30.7</u>	1266	30.8	2	1281	30.4	1273	30.6	<u>1275</u>	<u>30.6</u>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## General Notes

32-bit binaries were built on Windows XP Professional x64 Edition

## Base Compiler Invocation

C benchmarks:  
icl -Qc99

C++ benchmarks:  
icl

Fortran benchmarks:  
ifort

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## Base Compiler Invocation (Continued)

Benchmarks using both Fortran and C:

icl -Qc99 ifort

## Base Portability Flags

436.cactusADM: -Qlowercase /assume:underscore  
 444.namd: -TP  
 447.dealII: -DDEAL\_II\_MEMBER\_VAR\_SPECIALIZATION\_BUG  
 -DBOOST\_NO\_INTRINSIC\_WCHAR\_T  
 453.povray: -DSPEC\_CPU\_WINDOWS\_ICL  
 454.calculix: -DSPEC\_CPU\_NOZMODIFIER -Qlowercase  
 481.wrf: -DSPEC\_CPU\_WINDOWS\_ICL

## Base Optimization Flags

C benchmarks:

-fast /F512000000 shlW32M.lib -link /FORCE:MULTIPLE

C++ benchmarks:

-fast -Qcxx\_features /F512000000 shlW32M.lib  
-link /FORCE:MULTIPLE

Fortran benchmarks:

-fast /F1000000000 -link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:

-fast /F1000000000 -link /FORCE:MULTIPLE

## Peak Compiler Invocation

C benchmarks:

icl -Qc99

C++ benchmarks:

icl

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qc99 ifort



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## Peak Portability Flags

```

436.cactusADM: -Qlowercase /assume:underscore
444.namd: -TP
447.dealII: -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
           -DBOOST_NO_INTRINSIC_WCHAR_T
453.povray: -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_NOZMODIFIER -Qlowercase
481.wrf: -DSPEC_CPU_WINDOWS_ICL

```

## Peak Optimization Flags

### C benchmarks:

```

ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast /F512000000
shlw32M.lib -link /FORCE:MULTIPLE

```

### C++ benchmarks:

```

ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx_features
/F512000000 shlw32M.lib -link /FORCE:MULTIPLE

```

### Fortran benchmarks:

```

410.bwaves: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
           /F1000000000 -link /FORCE:MULTIPLE

```

```

416.gamess: ONESTEP -fast /F1000000000 -link /FORCE:MULTIPLE

```

434.zeusmp: Same as 410.bwaves

437.leslie3d: Same as 410.bwaves

459.GemsFDTD: basepeak = yes

465.tonto: Same as 410.bwaves

### Benchmarks using both Fortran and C:

```

435.gromacs: -fast /F1000000000 -link /FORCE:MULTIPLE

```

```

436.cactusADM: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast /F1000000000
              -link /FORCE:MULTIPLE

```

454.calculix: Same as 436.cactusADM

481.wrf: Same as 435.gromacs

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/dell.cpu2006.ic91.flags.20090715.html>



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You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/dell.cpu2006.ic91.flags.20090715.xml>

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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.0.  
Report generated on Tue Jul 22 10:55:29 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 9 January 2007.