



SPEC® CFP2006 Result

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Dell Inc.

SPECfp®_rate2006 = 26.7

Dell Precision 390 (Intel X6800, 2.93 GHz)

SPECfp_rate_base2006 = 26.1

CPU2006 license: 55

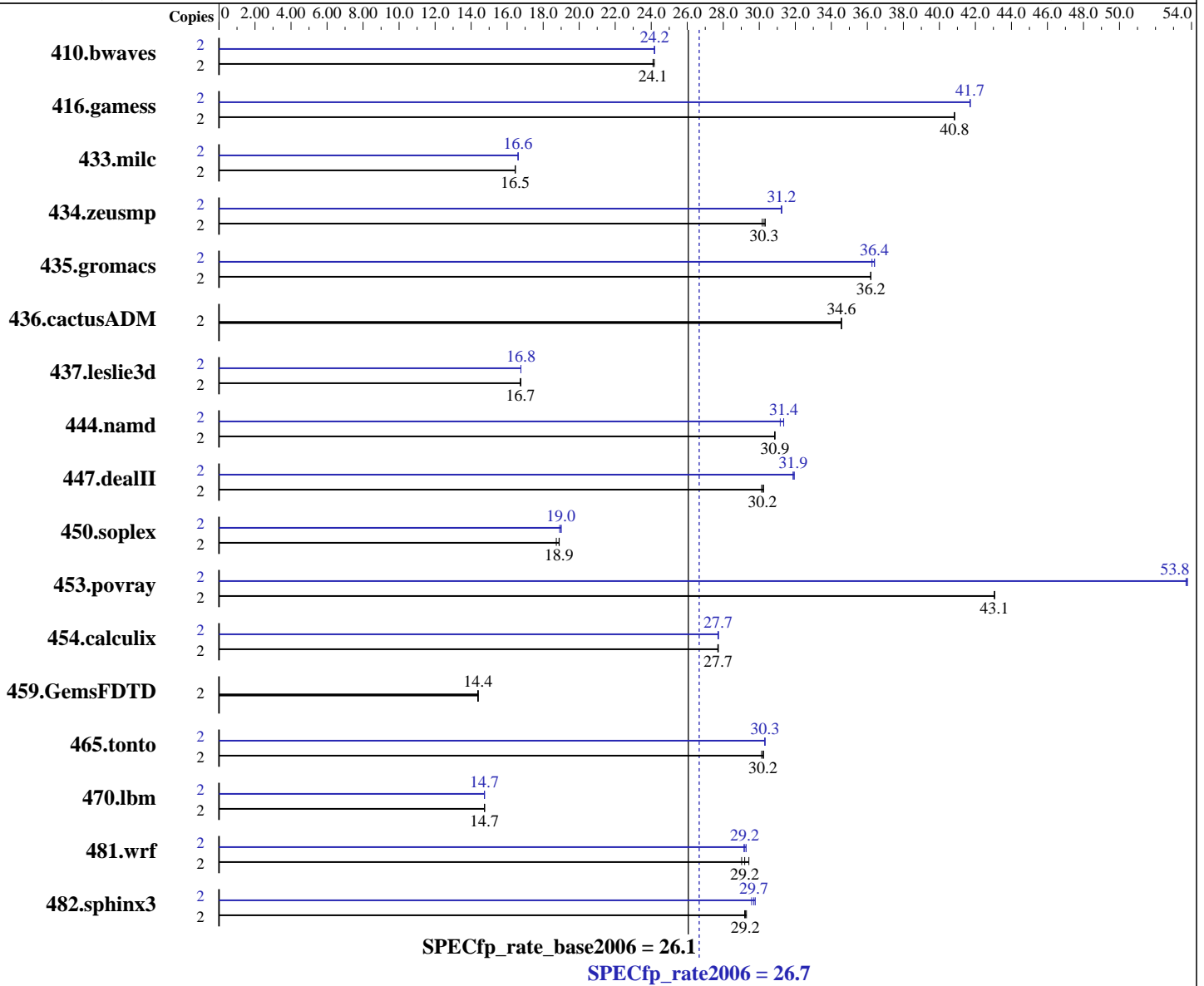
Test date: Aug-2007

Test sponsor: Dell Inc.

Hardware Availability: Sep-2007

Tested by: Dell Inc.

Software Availability: Jun-2007



Hardware

CPU Name: Intel Core 2 Extreme X6800
 CPU Characteristics: 1066 MHz Bus Speed
 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 x64 Edition SP2
 Compiler: Intel C++ Compiler for Intel 64, Version 10.0
 Build 20070426 Package ID: W_CC_P_10.0.025
 Intel Visual Fortran Compiler for Intel 64,
 Version 10.0
 Build 20070426 Package ID: W_FC_P_10.0.025
 Microsoft Visual Studio 2005 SP1
 Auto Parallel: No
 File System: NTFS

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L3 Cache: None
Other Cache: None
Memory: 4 GB (4x1 GB 667 MHz ECC CL5 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	2	1128	24.1	<u>1128</u>	<u>24.1</u>	1124	24.2	2	<u>1124</u>	<u>24.2</u>	1124	24.2	1124	24.2
416.gamess	2	959	40.8	959	40.8	<u>959</u>	<u>40.8</u>	2	939	41.7	939	41.7	<u>939</u>	<u>41.7</u>
433.milc	2	1117	16.4	1116	16.5	<u>1116</u>	<u>16.5</u>	2	<u>1105</u>	<u>16.6</u>	1105	16.6	1106	16.6
434.zeusmp	2	603	30.2	600	30.3	<u>601</u>	<u>30.3</u>	2	583	31.2	582	31.2	<u>583</u>	<u>31.2</u>
435.gromacs	2	395	36.2	395	36.2	<u>395</u>	<u>36.2</u>	2	394	36.3	<u>392</u>	<u>36.4</u>	392	36.4
436.cactusADM	2	691	34.6	<u>692</u>	<u>34.6</u>	692	34.6	2	691	34.6	<u>692</u>	<u>34.6</u>	692	34.6
437.leslie3d	2	<u>1123</u>	<u>16.7</u>	1121	16.8	1123	16.7	2	1121	16.8	1122	16.8	<u>1121</u>	<u>16.8</u>
444.namd	2	520	30.9	520	30.9	<u>520</u>	<u>30.9</u>	2	515	31.2	512	31.4	<u>512</u>	<u>31.4</u>
447.dealII	2	<u>758</u>	<u>30.2</u>	757	30.2	759	30.1	2	<u>718</u>	<u>31.9</u>	718	31.9	716	31.9
450.soplex	2	891	18.7	883	18.9	<u>883</u>	<u>18.9</u>	2	882	18.9	878	19.0	<u>878</u>	<u>19.0</u>
453.povray	2	<u>247</u>	<u>43.1</u>	247	43.1	247	43.1	2	198	53.7	<u>198</u>	<u>53.8</u>	198	53.8
454.calculix	2	596	27.7	595	27.7	<u>595</u>	<u>27.7</u>	2	595	27.7	596	27.7	<u>595</u>	<u>27.7</u>
459.GemsFDTD	2	1477	14.4	<u>1475</u>	<u>14.4</u>	1474	14.4	2	1477	14.4	<u>1475</u>	<u>14.4</u>	1474	14.4
465.tonto	2	653	30.1	<u>652</u>	<u>30.2</u>	651	30.2	2	649	30.3	649	30.3	<u>649</u>	<u>30.3</u>
470.lbm	2	<u>1864</u>	<u>14.7</u>	1864	14.7	1864	14.7	2	1865	14.7	<u>1864</u>	<u>14.7</u>	1864	14.7
481.wrf	2	770	29.0	<u>765</u>	<u>29.2</u>	759	29.4	2	763	29.3	<u>765</u>	<u>29.2</u>	766	29.1
482.sphinx3	2	<u>1334</u>	<u>29.2</u>	1336	29.2	1331	29.3	2	1318	29.6	1309	29.8	<u>1312</u>	<u>29.7</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: -D_Complex= -DSPEC_CPU_P64
434.zeusmp: -DSPEC_CPU_P64
435.gromacs: -D_Complex= -DSPEC_CPU_P64
436.cactusADM: -D_Complex= -DSPEC_CPU_P64 -Qlowercase /assume:underscore
437.leslie3d: -DSPEC_CPU_P64
444.namd: -DSPEC_CPU_P64 /TP
447.dealII: -D_Complex= -DSPEC_CPU_P64 -DBOOST_NO_INTRINSIC_WCHAR_T
-DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
450.soplex: -DSPEC_CPU_P64
453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
454.calculix: -D_Complex= -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER
-Qlowercase
459.GemsFDTD: -DSPEC_CPU_P64
465.tonto: -DSPEC_CPU_P64
470.lbm: -D_Complex= -DSPEC_CPU_P64
481.wrf: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
482.sphinx3: -D_Complex= -DSPEC_CPU_P64

```

Base Optimization Flags

C benchmarks:

```
-fast -Qauto_ilp32 /F950000000 shlW64M.lib
-link /FORCE:MULTIPLE
```

C++ benchmarks:

```
-fast -Qcxx_features -Qauto_ilp32 /F950000000 shlW64M.lib
-link /FORCE:MULTIPLE
```

Fortran benchmarks:

```
-fast /F950000000 -link /FORCE:MULTIPLE
```

Benchmarks using both Fortran and C:

```
-fast -Qauto_ilp32 /F950000000 -link /FORCE:MULTIPLE
```



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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: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qunroll2 -Oa -Qauto_ilp32 /F950000000 sh1W64M.lib
-link /FORCE:MULTIPLE

470.lbm: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qunroll2 -Qscalar-rep- -Qprefetch -Qauto_ilp32
/F950000000 sh1W64M.lib -link /FORCE:MULTIPLE

482.sphinx3: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qunroll2 -Qauto_ilp32 /F950000000 sh1W64M.lib
-link /FORCE:MULTIPLE

C++ benchmarks:

444.namd: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Oa
-Qcxx_features -Qauto_ilp32 /F950000000 sh1W64M.lib
-link /FORCE:MULTIPLE

447.dealIII: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qprefetch -Qcxx_features -Qauto_ilp32 /F950000000
sh1W64M.lib -link /FORCE:MULTIPLE

450.soplex: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qcxx_features -Qauto_ilp32 /F950000000 sh1W64M.lib
-link /FORCE:MULTIPLE

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Peak Optimization Flags (Continued)

453.povray: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qansi-alias -Qcxx_features -Qauto_ilp32 /F950000000
sh1W64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: ONESTEP -fast /F950000000 -link /FORCE:MULTIPLE

416.gamess: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep- /F950000000
-link /FORCE:MULTIPLE

434.zeusmp: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -QxT -O2
-Qprec-div- -Qunroll10 -Qscalar-rep- /F950000000
-link /FORCE:MULTIPLE

437.leslie3d: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
/F950000000 -link /FORCE:MULTIPLE

459.GemsFDTD: basepeak = yes

465.tonto: Same as 437.leslie3d

Benchmarks using both Fortran and C:

435.gromacs: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Oa
-Qauto_ilp32 /F950000000 -link /FORCE:MULTIPLE

436.cactusADM: basepeak = yes

454.calculix: -fast -Qauto_ilp32 /F950000000
-link /FORCE:MULTIPLE

481.wrf: Same as 454.calculix

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

<http://www.spec.org/cpu2006/flags/dell.ic10.windows.flags.html>

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

<http://www.spec.org/cpu2006/flags/dell.ic10.windows.flags.xml>



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