



SPEC[®] CFP2006 Result

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Dell Inc.

SPECfp[®]2006 = 21.9

Dell Precision T3400 (Intel QX9650, 3.00 GHz)

SPECfp_base2006 = 20.7

CPU2006 license: 55

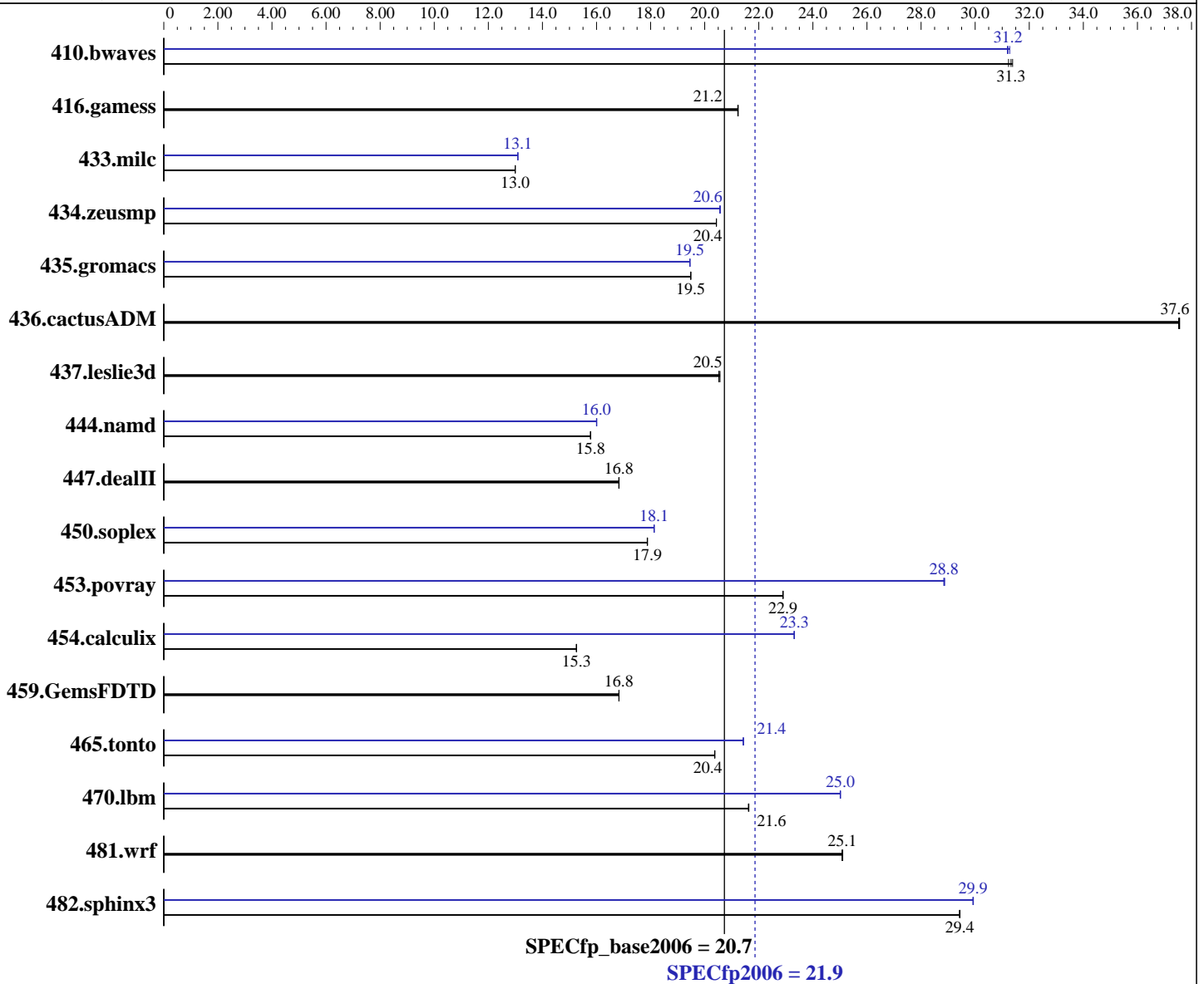
Test date: Dec-2007

Test sponsor: Dell Inc.

Hardware Availability: Jan-2008

Tested by: Dell Inc.

Software Availability: Nov-2007



Hardware

CPU Name: Intel Core 2 Extreme QX9650
 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: 12 MB I+D on chip per chip, 6 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: Yes
 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 8.1 for x64

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	433	31.4	434	31.3	435	31.2	435	31.2	434	31.3	436	31.2
416.gamess	922	21.2	922	21.2	923	21.2	922	21.2	922	21.2	923	21.2
433.milc	707	13.0	707	13.0	706	13.0	701	13.1	701	13.1	701	13.1
434.zeusmp	445	20.4	445	20.4	445	20.4	443	20.6	442	20.6	443	20.6
435.gromacs	366	19.5	366	19.5	366	19.5	367	19.5	367	19.5	367	19.5
436.cactusADM	318	37.5	318	37.6	318	37.6	318	37.5	318	37.6	318	37.6
437.leslie3d	458	20.5	457	20.6	458	20.5	458	20.5	457	20.6	458	20.5
444.namd	508	15.8	508	15.8	508	15.8	501	16.0	501	16.0	501	16.0
447.dealII	680	16.8	680	16.8	680	16.8	680	16.8	680	16.8	680	16.8
450.soplex	466	17.9	467	17.9	466	17.9	460	18.1	460	18.1	460	18.1
453.povray	232	22.9	232	22.9	232	22.9	184	28.8	184	28.9	184	28.8
454.calculix	541	15.3	541	15.3	541	15.3	354	23.3	354	23.3	354	23.3
459.GemsFDTD	630	16.8	630	16.8	631	16.8	630	16.8	630	16.8	631	16.8
465.tonto	483	20.4	483	20.4	483	20.4	459	21.4	459	21.4	459	21.4
470.lbm	636	21.6	635	21.6	635	21.6	549	25.0	549	25.0	549	25.0
481.wrf	445	25.1	445	25.1	445	25.1	445	25.1	445	25.1	445	25.1
482.sphinx3	662	29.4	663	29.4	662	29.4	651	29.9	652	29.9	651	29.9

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 -Qparallel /F1000000000 shlw64mt.lib
libguide40.lib -link /FORCE:MULTIPLE

```

C++ benchmarks:

```

-fast -Qauto-ilp32 -Qparallel -Qcxx_features /F1000000000
shlw64mt.lib libguide40.lib -link /FORCE:MULTIPLE

```

Fortran benchmarks:

```

-fast -Qauto-ilp32 -Qparallel /F1000000000 libguide40.lib
-link /FORCE:MULTIPLE

```

Benchmarks using both Fortran and C:

```

-fast -Qauto-ilp32 -Qparallel /F1000000000 libguide40.lib
-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: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qunroll2 -Oa /F1000000000 shlw64mt.lib libguide40.lib
-link /FORCE:MULTIPLE

470.lbm: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qunroll2 -Qscalar-rep- -Qprefetch /F1000000000
shlw64mt.lib libguide40.lib -link /FORCE:MULTIPLE

482.sphinx3: -fast -Qauto-ilp32 -Qunroll2 /F1000000000 shlw64mt.lib
libguide40.lib -link /FORCE:MULTIPLE

C++ benchmarks:

444.namd: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Oa -Qcxx_features /F1000000000 shlw64mt.lib
libguide40.lib -link /FORCE:MULTIPLE

447.dealII: basepeak = yes

450.soplex: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qparallel -Qcxx_features /F1000000000 shlw64mt.lib
libguide40.lib -link /FORCE:MULTIPLE

453.povray: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qunroll4 -Qansi-alias -Qcxx_features /F1000000000
shlw64mt.lib libguide40.lib -link /FORCE:MULTIPLE

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Peak Optimization Flags (Continued)

Fortran benchmarks:

410.bwaves: -fast -Qauto-ilp32 -Qparallel -Qprefetch /F1000000000
libguide40.lib -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 libguide40.lib
-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 libguide40.lib
-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 libguide40.lib
-link /FORCE:MULTIPLE

436.cactusADM: basepeak = yes

454.calculix: -fast -Qauto-ilp32 -Qunroll-aggressive /F1000000000
libguide40.lib -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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