



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp®2006 = 22.9

Dell Precision T7400 (Intel Xeon X5272, 3.40 GHz)

SPECfp_base2006 = 20.7

CPU2006 license: 55

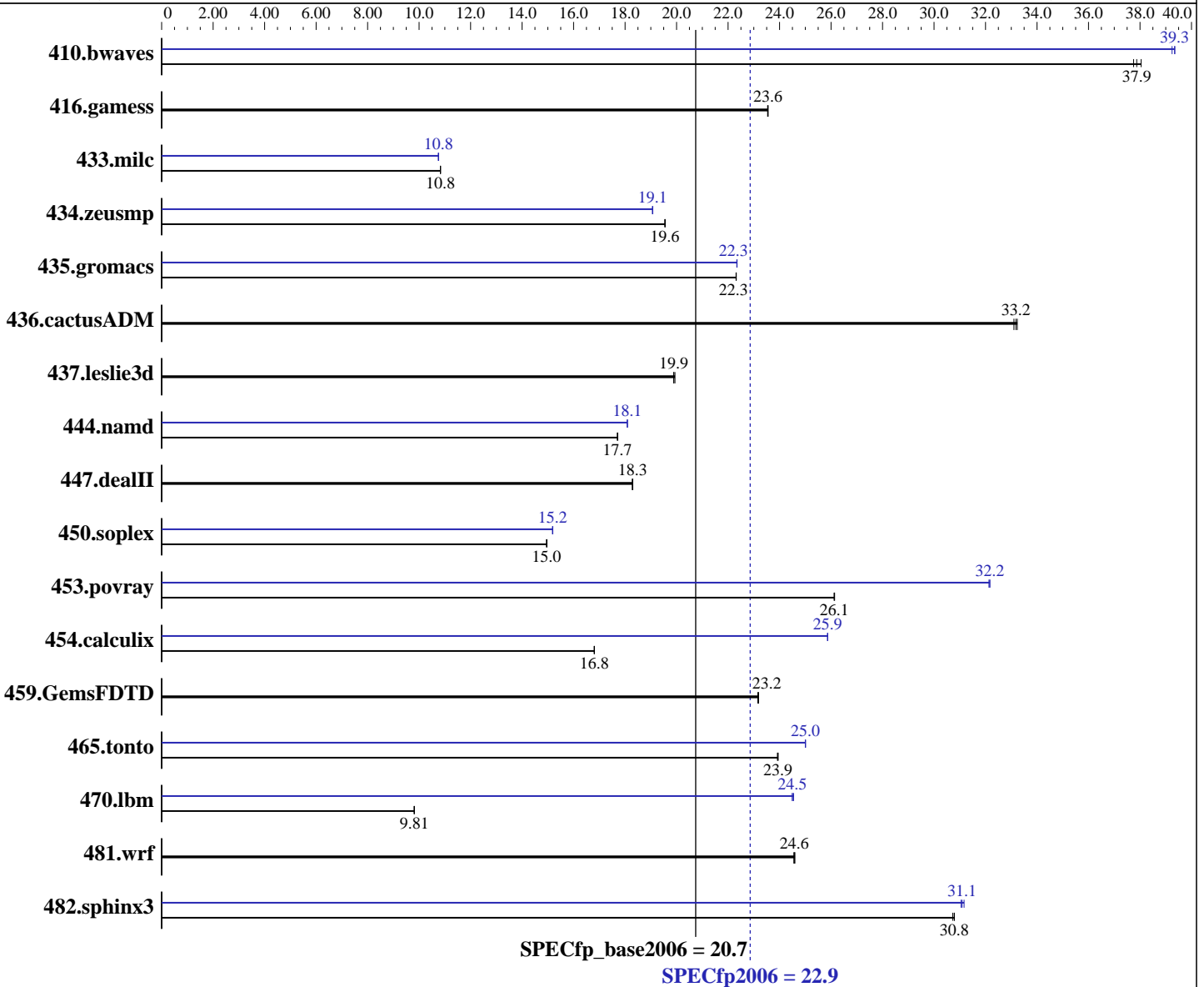
Test date: Apr-2008

Test sponsor: Dell Inc.

Hardware Availability: Jan-2008

Tested by: Dell Inc.

Software Availability: Mar-2008



Hardware

CPU Name: Intel Xeon X5272
 CPU Characteristics: 1600 MHz Bus Speed
 CPU MHz: 3400
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 6 MB I+D on chip per chip

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Software

Operating System: Windows Vista Ultimate (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 10.0
 Build 20080312 Package ID: w_fc_p_10.1.021
 Microsoft Visual Studio 2005 SP1

Auto Parallel: Yes
 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 160 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	360	37.8	357	38.0	<u>359</u>	<u>37.9</u>	<u>345</u>	<u>39.3</u>	345	39.4	346	39.2
416.gamess	831	23.6	<u>831</u>	<u>23.6</u>	832	23.5	831	23.6	<u>831</u>	<u>23.6</u>	832	23.5
433.milc	847	10.8	848	10.8	<u>848</u>	<u>10.8</u>	<u>854</u>	<u>10.8</u>	854	10.8	854	10.8
434.zeusmp	465	19.6	<u>465</u>	<u>19.6</u>	466	19.5	477	19.1	477	19.1	<u>477</u>	<u>19.1</u>
435.gromacs	320	22.3	<u>320</u>	<u>22.3</u>	320	22.3	319	22.3	<u>319</u>	<u>22.3</u>	320	22.3
436.cactusADM	361	33.1	<u>360</u>	<u>33.2</u>	360	33.2	361	33.1	<u>360</u>	<u>33.2</u>	360	33.2
437.leslie3d	473	19.9	<u>472</u>	<u>19.9</u>	471	19.9	473	19.9	<u>472</u>	<u>19.9</u>	471	19.9
444.namd	<u>453</u>	<u>17.7</u>	453	17.7	453	17.7	443	18.1	<u>443</u>	<u>18.1</u>	443	18.1
447.dealII	625	18.3	626	18.3	<u>625</u>	<u>18.3</u>	625	18.3	626	18.3	<u>625</u>	<u>18.3</u>
450.soplex	<u>558</u>	<u>15.0</u>	558	15.0	557	15.0	<u>549</u>	<u>15.2</u>	549	15.2	549	15.2
453.povray	<u>204</u>	<u>26.1</u>	204	26.1	204	26.1	166	32.1	165	32.2	<u>165</u>	<u>32.2</u>
454.calculix	<u>491</u>	<u>16.8</u>	491	16.8	491	16.8	319	25.9	<u>319</u>	<u>25.9</u>	319	25.9
459.GemsFDTD	<u>458</u>	<u>23.2</u>	458	23.2	458	23.2	<u>458</u>	<u>23.2</u>	458	23.2	458	23.2
465.tonto	411	23.9	411	23.9	<u>411</u>	<u>23.9</u>	394	25.0	<u>394</u>	<u>25.0</u>	393	25.0
470.lbm	<u>1400</u>	<u>9.81</u>	1401	9.81	1400	9.82	<u>561</u>	<u>24.5</u>	560	24.5	561	24.5
481.wrf	454	24.6	<u>455</u>	<u>24.6</u>	455	24.6	454	24.6	<u>455</u>	<u>24.6</u>	455	24.6
482.sphinx3	<u>633</u>	<u>30.8</u>	633	30.8	634	30.7	625	31.2	628	31.0	<u>627</u>	<u>31.1</u>

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

General Notes

BIOS Settings
 Adjacent Cache Line Prefetch set to ON

Base Compiler Invocation

C benchmarks:
 icl -Qstd=c99

C++ benchmarks:
 icl

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Base Compiler Invocation (Continued)

Fortran benchmarks:

ifort

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 libguide40.lib
-link /FORCE:MULTIPLE

C++ benchmarks:

-fast -Qauto-ilp32 -Qparallel -Qcxx_features /F1000000000
shlw64m.lib libguide40.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

-fast -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 libguide40.lib
-link /FORCE:MULTIPLE

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

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

C++ benchmarks:

444.namd: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Oa -Qcxx_features /F1000000000 shlw64m.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 shlw64m.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
shlw64m.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.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.xml>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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