



SPEC® CFP2006 Result

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Dell Inc.

SPECfp®2006 = 16.9

Dell Precision 690 (Intel 5160, 3.00 GHz)

SPECfp_base2006 = 16.5

CPU2006 license: 55

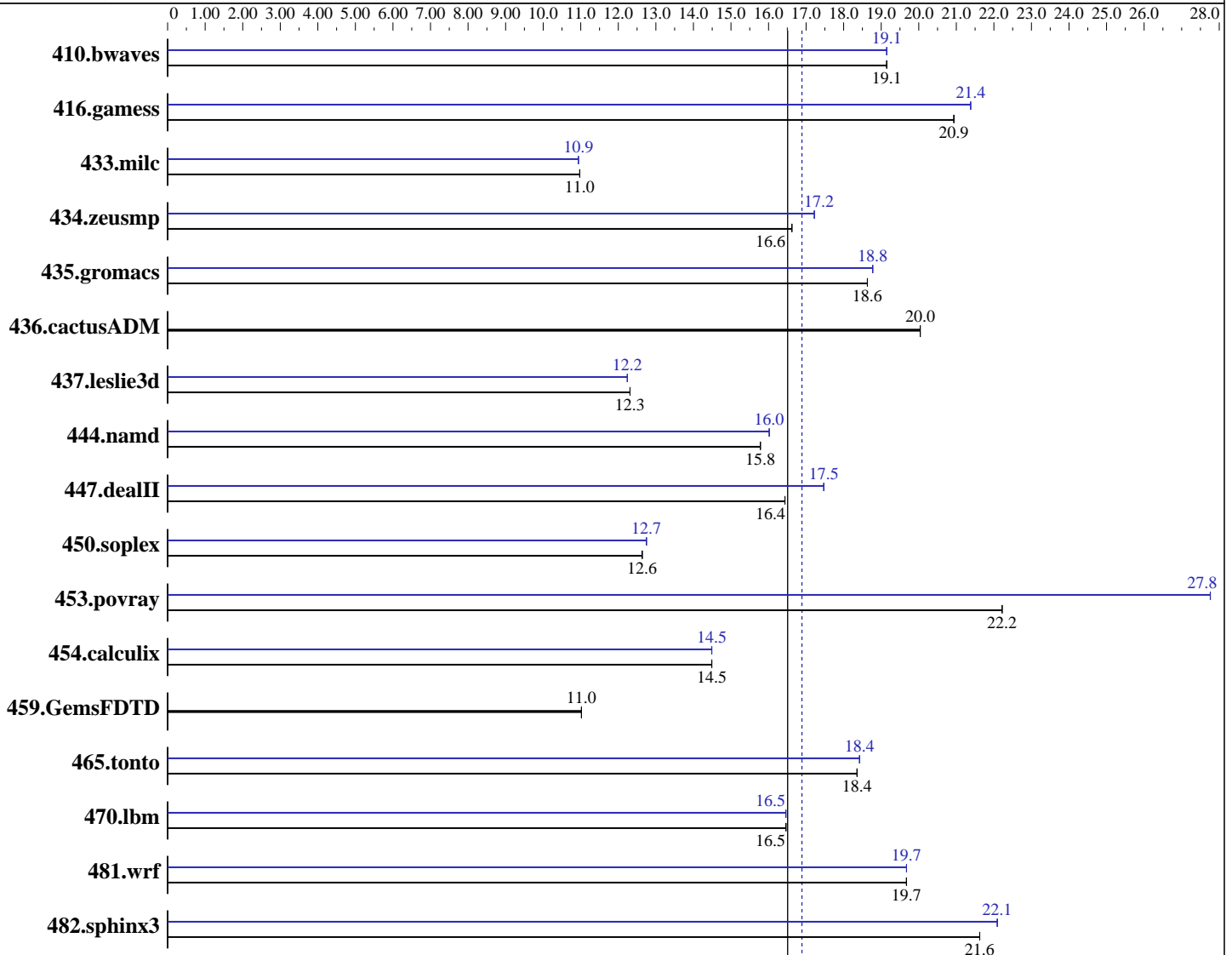
Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Aug-2007

Hardware Availability: May-2006

Software Availability: Jun-2007



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Hardware

CPU Name: Intel Xeon 5160
 CPU Characteristics: 1333 MHz Bus Speed
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
 CPU(s) orderable: 1,2 chips
 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: 8 GB (8x1 GB 667 MHz ECC CL5 FB-DIMM)
 Disk Subsystem: 1 x 73GB SAS 10K 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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	710	19.1	710	19.1	710	19.1	710	19.1	710	19.1	710	19.1
416.gamess	935	20.9	935	20.9	935	20.9	916	21.4	916	21.4	916	21.4
433.milc	837	11.0	837	11.0	837	11.0	839	10.9	839	10.9	839	10.9
434.zeusmp	547	16.6	547	16.6	547	16.6	528	17.2	528	17.2	528	17.2
435.gromacs	383	18.6	383	18.6	383	18.6	380	18.8	380	18.8	380	18.8
436.cactusADM	596	20.0	596	20.0	596	20.0	596	20.0	596	20.0	596	20.0
437.leslie3d	763	12.3	764	12.3	764	12.3	768	12.2	768	12.2	768	12.2
444.namd	508	15.8	508	15.8	508	15.8	501	16.0	501	16.0	501	16.0
447.dealII	696	16.4	696	16.4	696	16.4	655	17.5	655	17.5	655	17.5
450.soplex	660	12.6	660	12.6	660	12.6	654	12.7	654	12.7	654	12.7
453.povray	239	22.2	239	22.2	239	22.2	192	27.8	192	27.8	192	27.8
454.calculix	569	14.5	569	14.5	569	14.5	569	14.5	569	14.5	569	14.5
459.GemsFDTD	963	11.0	963	11.0	963	11.0	963	11.0	963	11.0	963	11.0
465.tonto	536	18.4	536	18.4	536	18.4	534	18.4	534	18.4	534	18.4
470.lbm	835	16.5	835	16.5	835	16.5	835	16.5	835	16.5	835	16.5
481.wrf	568	19.7	568	19.7	568	19.7	568	19.7	568	19.7	568	19.7
482.sphinx3	901	21.6	901	21.6	901	21.6	882	22.1	882	22.1	882	22.1

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)

BIOS Settings

Snoop Filter : OFF
 Adjacent Cache Line Prefetch : ON
 Hardware Prefetcher : ON

Snoop Filter

Preserves cache coherency while minimizing snoops to remote nodes.

Adjacent Cache Line Prefetch

Prefetch data in order to shorten execution cycles and maximize data processing efficiency.



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Base Compiler Invocation

C benchmarks:
icl -Qstd=c99

C++ benchmarks:
icl

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: -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

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Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:

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

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

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Peak Optimization Flags (Continued)

447.dealII: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qprefetch -Qcxx_features -Qauto_ilp32 /F950000000
shlW64M.lib -link /FORCE:MULTIPLE

450.soplex: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qcxx_features -Qauto_ilp32 /F950000000 shlW64M.lib
-link /FORCE:MULTIPLE

453.povray: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qansi-alias -Qcxx_features -Qauto_ilp32 /F950000000
shlW64M.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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