



SPEC® CFP2006 Result

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Dell Inc.

Dell Precision 690 (Intel Xeon 5160, 3.00 GHz)

SPECfp®_rate2006 = 43.0

SPECfp_rate_base2006 = 42.3

CPU2006 license: 55

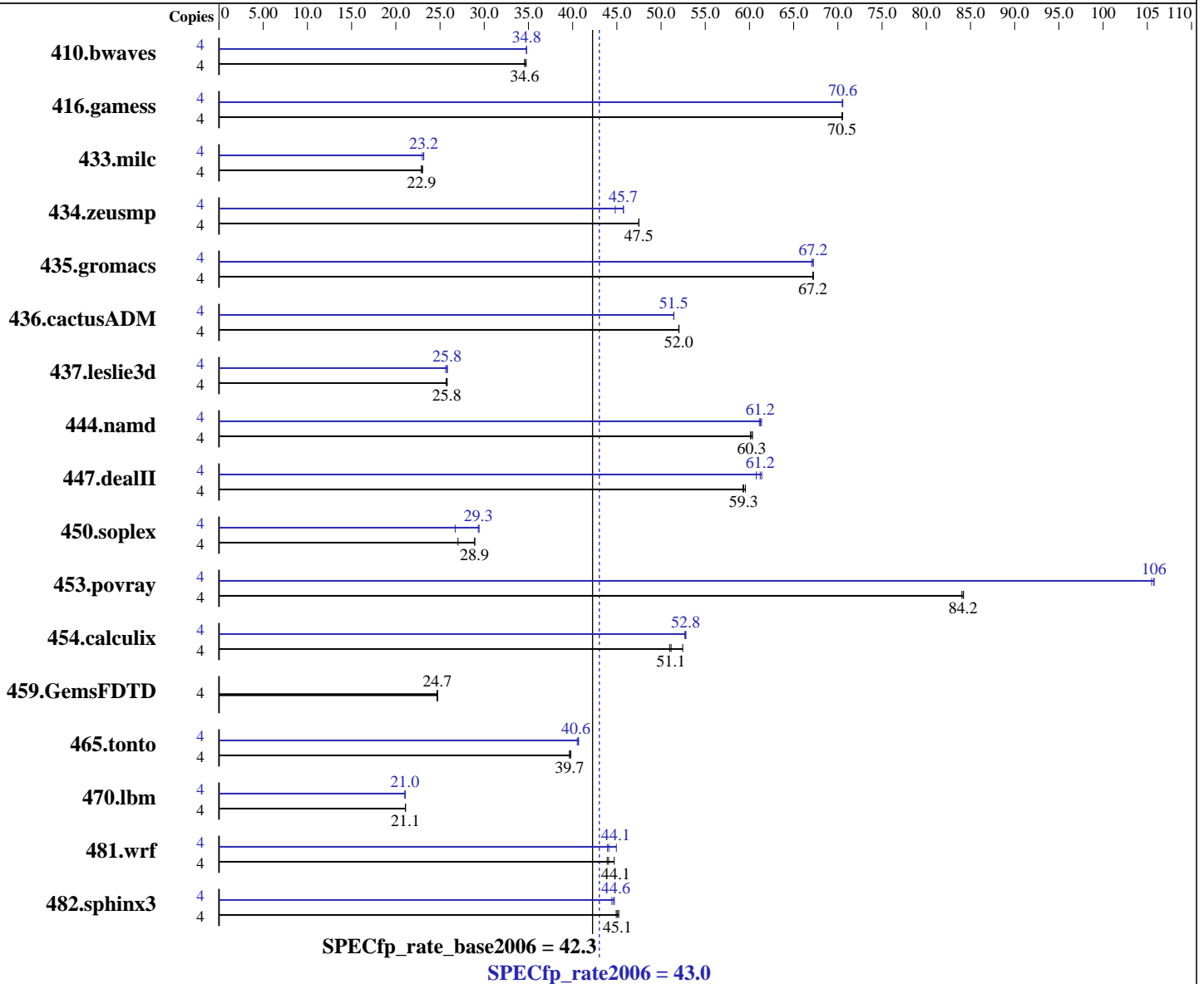
Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Jan-2007

Hardware Availability: May-2006

Software Availability: Jan-2007



Hardware

CPU Name: Intel Xeon 5160
 CPU Characteristics: 1333 MHz Bus Speed
 CPU MHz: 3000
 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: 4 MB I+D on chip per chip

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Software

Operating System: Windows XP Professional x64 Edition
 Compiler: Intel C++ Compiler 9.1 for IA32 (20061103Z)
 Intel FORTRAN Compiler 9.1 for IA32 (20061103Z)
 Microsoft Visual Studio 2005
 Auto Parallel: No
 File System: NTFS
 System State: Default
 Base Pointers: 32-bit
 Peak Pointers: 32-bit

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L3 Cache: None
Other Cache: None
Memory: 8 GB (8x1 GB 667 MHz ECC CL5 DDR2 FB-DIMM)
Disk Subsystem: 1 x 72 GB SAS 10K RPM
Other Hardware: None

Other Software: MicroQuill SmartHeap Library 8.0

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	1572	34.6	1564	34.8	<u>1572</u>	<u>34.6</u>	4	<u>1562</u>	<u>34.8</u>	1563	34.8	1562	34.8
416.gamess	4	<u>1111</u>	<u>70.5</u>	1111	70.5	1110	70.5	4	1111	70.5	1110	70.6	<u>1110</u>	<u>70.6</u>
433.milc	4	1594	23.0	1604	22.9	<u>1602</u>	<u>22.9</u>	4	<u>1586</u>	<u>23.2</u>	1586	23.2	1597	23.0
434.zeusmp	4	767	47.5	766	47.5	<u>766</u>	<u>47.5</u>	4	812	44.8	<u>796</u>	<u>45.7</u>	796	45.7
435.gromacs	4	<u>425</u>	<u>67.2</u>	425	67.2	425	67.2	4	426	67.0	425	67.2	<u>425</u>	<u>67.2</u>
436.cactusADM	4	<u>919</u>	<u>52.0</u>	919	52.0	919	52.0	4	929	51.5	<u>929</u>	<u>51.5</u>	929	51.4
437.leslie3d	4	<u>1459</u>	<u>25.8</u>	1463	25.7	1457	25.8	4	<u>1457</u>	<u>25.8</u>	1456	25.8	1466	25.6
444.namd	4	534	60.1	<u>532</u>	<u>60.3</u>	532	60.3	4	525	61.1	<u>524</u>	<u>61.2</u>	523	61.4
447.dealII	4	772	59.3	769	59.5	<u>771</u>	<u>59.3</u>	4	<u>748</u>	<u>61.2</u>	753	60.8	745	61.4
450.soplex	4	1234	27.0	1153	28.9	<u>1154</u>	<u>28.9</u>	4	1248	26.7	<u>1138</u>	<u>29.3</u>	1134	29.4
453.povray	4	253	84.0	<u>253</u>	<u>84.2</u>	253	84.2	4	202	105	<u>201</u>	<u>106</u>	201	106
454.calculix	4	629	52.5	<u>645</u>	<u>51.1</u>	647	51.0	4	626	52.7	<u>625</u>	<u>52.8</u>	625	52.8
459.GemsFDTD	4	1717	24.7	<u>1719</u>	<u>24.7</u>	1719	24.7	4	1717	24.7	<u>1719</u>	<u>24.7</u>	1719	24.7
465.tonto	4	<u>992</u>	<u>39.7</u>	993	39.6	989	39.8	4	968	40.7	<u>968</u>	<u>40.6</u>	971	40.5
470.lbm	4	2607	21.1	<u>2606</u>	<u>21.1</u>	2606	21.1	4	2611	21.0	2613	21.0	<u>2612</u>	<u>21.0</u>
481.wrf	4	999	44.7	<u>1014</u>	<u>44.1</u>	1018	43.9	4	994	44.9	1017	43.9	<u>1013</u>	<u>44.1</u>
482.sphinx3	4	1735	44.9	1724	45.2	<u>1730</u>	<u>45.1</u>	4	1754	44.4	<u>1746</u>	<u>44.6</u>	1743	44.7

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

Optimization for high-frequency FSB applications set to ON

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



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Base Compiler Invocation

C benchmarks:
icl -Qc99
C++ benchmarks:
icl
Fortran benchmarks:
ifort
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

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Peak Compiler Invocation (Continued)

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qc99 ifort

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

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Peak Optimization Flags (Continued)

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>

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.

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