



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp[®]_rate2006 = 80.0

PowerEdge 2900 III (Intel Xeon X5460, 3.16 GHz)

SPECfp_rate_base2006 = 73.3

CPU2006 license: 55

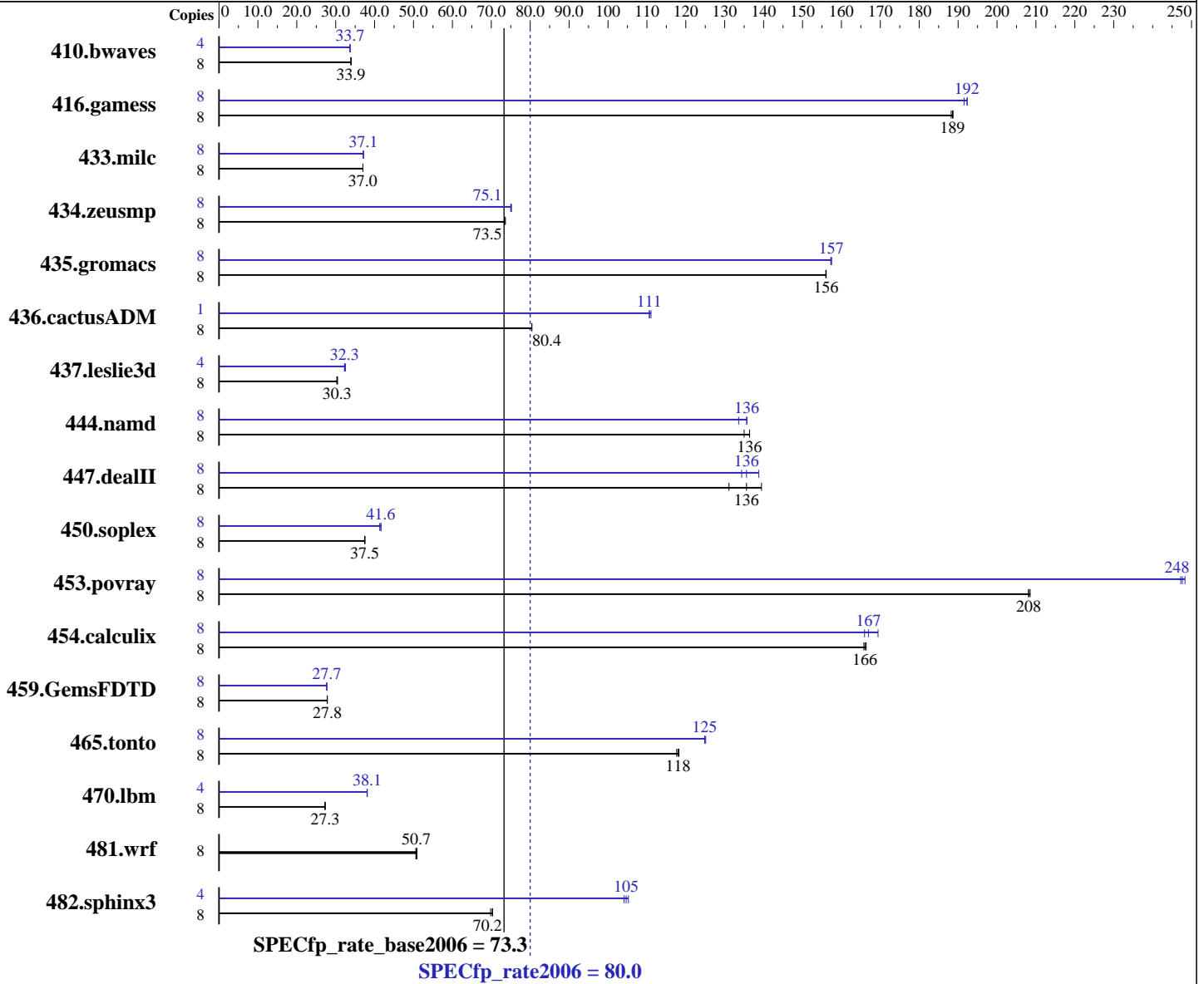
Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Oct-2008

Hardware Availability: Sep-2008

Software Availability: Nov-2008



Hardware

CPU Name: Intel Xeon X5460
 CPU Characteristics: 3166
 CPU MHz: 3166
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
 CPU(s) orderable: 1,2 chips
 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

Continued on next page

Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP2, Kernel 2.6.16-60.0.21-smp
 Compiler: Intel C++ and Fortran Compiler 11.0 for Linux Build 20080730 Package ID: l_cproc_b_11.0.042, l_fproc_b_11.0.042
 Auto Parallel: Yes
 File System: ReiserFS
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp_rate2006 = 80.0

PowerEdge 2900 III (Intel Xeon X5460, 3.16 GHz)

SPECfp_rate_base2006 = 73.3

CPU2006 license: 55

Test date: Oct-2008

Test sponsor: Dell Inc.

Hardware Availability: Sep-2008

Tested by: Dell Inc.

Software Availability: Nov-2008

L3 Cache: None
Other Cache: None
Memory: 16 GB (8 x 2 GB DDR2-667)
Disk Subsystem: 2 x 73 GB 15000 RPM SAS
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: Binutils 2.18.50.0.7.20080502

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	3205	33.9	3202	34.0	3204	33.9	4	1613	33.7	1615	33.7	1615	33.7
416.gamess	8	832	188	830	189	831	189	8	814	192	818	192	815	192
433.milc	8	1985	37.0	1985	37.0	1985	37.0	8	1978	37.1	1978	37.1	1979	37.1
434.zeusmp	8	991	73.5	989	73.6	992	73.4	8	971	75.0	968	75.2	970	75.1
435.gromacs	8	366	156	366	156	366	156	8	363	157	363	157	363	157
436.cactusADM	8	1188	80.4	1189	80.4	1189	80.4	1	108	111	108	111	108	111
437.leslie3d	8	2467	30.5	2480	30.3	2479	30.3	4	1166	32.3	1164	32.3	1156	32.5
444.namd	8	475	135	470	136	470	136	8	473	136	480	134	473	136
447.dealII	8	675	136	656	139	698	131	8	675	136	660	139	681	134
450.soplex	8	1782	37.4	1781	37.5	1778	37.5	8	1603	41.6	1615	41.3	1603	41.6
453.povray	8	204	208	204	209	204	208	8	172	247	171	248	172	248
454.calculix	8	397	166	397	166	398	166	8	395	167	398	166	390	169
459.GemsFDTD	8	3051	27.8	3050	27.8	3049	27.8	8	3064	27.7	3064	27.7	3064	27.7
465.tonto	8	669	118	666	118	667	118	8	630	125	631	125	629	125
470.lbm	8	4031	27.3	4029	27.3	4027	27.3	4	1442	38.1	1442	38.1	1444	38.1
481.wrf	8	1756	50.9	1761	50.7	1766	50.6	8	1756	50.9	1761	50.7	1766	50.6
482.sphinx3	8	2233	69.8	2220	70.2	2216	70.3	4	749	104	741	105	745	105

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

Submit Notes

The config file option 'submit' was used.

Operating System Notes

'ulimit -s unlimited' was used to set the stack size to unlimited prior to run

Platform Notes

BIOS Settings:

Hardware Prefetcher = Disabled (Default = Enabled)

Adjacent Cache Line Prefetch = Disabled (Default = Enabled)



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp_rate2006 = 80.0

PowerEdge 2900 III (Intel Xeon X5460, 3.16 GHz)

SPECfp_rate_base2006 = 73.3

CPU2006 license: 55

Test date: Oct-2008

Test sponsor: Dell Inc.

Hardware Availability: Sep-2008

Tested by: Dell Inc.

Software Availability: Nov-2008

General Notes

taskset was used to bind processes to cores except for 436.cactusADM peak
OMP_NUM_THREADS set to number of processors
KMP_AFFINITY set to "physical,0"
KMP_STACKSIZE set to 64M

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icc ifort

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.deallI: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp_rate2006 = 80.0

PowerEdge 2900 III (Intel Xeon X5460, 3.16 GHz)

SPECfp_rate_base2006 = 73.3

CPU2006 license: 55

Test date: Oct-2008

Test sponsor: Dell Inc.

Hardware Availability: Sep-2008

Tested by: Dell Inc.

Software Availability: Nov-2008

Base Optimization Flags (Continued)

C++ benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

Fortran benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

Benchmarks using both Fortran and C:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

Peak Compiler Invocation

C benchmarks (except as noted below):

icc

482.sphinx3: /opt/intel/Compiler/11.0/042/bin/ia32/icc
-L/opt/intel/Compiler/11.0/042/ipp/ia32/lib
-I/opt/intel/Compiler/11.0/042/ipp/ia32/include

C++ benchmarks (except as noted below):

icpc

450.soplex: /opt/intel/Compiler/11.0/042/bin/ia32/icpc
-L/opt/intel/Compiler/11.0/042/ipp/ia32/lib
-I/opt/intel/Compiler/11.0/042/ipp/ia32/include

Fortran benchmarks (except as noted below):

ifort

437.leslie3d: /opt/intel/Compiler/11.0/042/bin/ia32/ifort
-L/opt/intel/Compiler/11.0/042/ipp/ia32/lib
-I/opt/intel/Compiler/11.0/042/ipp/ia32/include

Benchmarks using both Fortran and C:

icc ifort

Peak Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp_rate2006 = 80.0

PowerEdge 2900 III (Intel Xeon X5460, 3.16 GHz)

SPECfp_rate_base2006 = 73.3

CPU2006 license: 55

Test date: Oct-2008

Test sponsor: Dell Inc.

Hardware Availability: Sep-2008

Tested by: Dell Inc.

Software Availability: Nov-2008

Peak Portability Flags (Continued)

453.povray: -DSPEC_CPU_LP64
 454.calculix: -DSPEC_CPU_LP64 -nofor_main
 459.GemsFDTD: -DSPEC_CPU_LP64
 465.tonto: -DSPEC_CPU_LP64
 470.lbm: -DSPEC_CPU_LP64
 481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

433.milc: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
 -no-prec-div -static -fno-alias
 470.lbm: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch
 -auto-ilp32
 482.sphinx3: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2

C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
 -no-prec-div -static -fno-alias -auto-ilp32
 447.dealII: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
 -no-prec-div -static -unroll2 -ansi-alias -scalar-rep-
 450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
 -no-prec-div -static -opt-malloc-options=3
 453.povray: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
 -no-prec-div -static -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch
 416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
 -no-prec-div -static -unroll2 -Ob0 -ansi-alias
 -scalar-rep-
 434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
 -no-prec-div -static
 437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
 -no-prec-div -static -opt-malloc-options=3 -opt-prefetch

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp_rate2006 = 80.0

PowerEdge 2900 III (Intel Xeon X5460, 3.16 GHz)

SPECfp_rate_base2006 = 73.3

CPU2006 license: 55

Test date: Oct-2008

Test sponsor: Dell Inc.

Hardware Availability: Sep-2008

Tested by: Dell Inc.

Software Availability: Nov-2008

Peak Optimization Flags (Continued)

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -unroll2 -Ob0 -opt-prefetch

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -unroll4 -auto

Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -opt-prefetch -auto-ilp32

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -unroll2 -opt-prefetch -parallel
-auto-ilp32

454.calculix: -xSSE4.1 -ipo -O3 -no-prec-div -static -auto-ilp32

481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090713.05.html>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.02.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090713.05.xml>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.02.xml>

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.1.

Report generated on Tue Jul 22 20:26:32 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 11 November 2008.