



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECfp®_rate2006 = 78.0

IBM System x iDataPlex dx340 (Intel Xeon E5450)

SPECfp_rate_base2006 = 70.5

CPU2006 license: 11

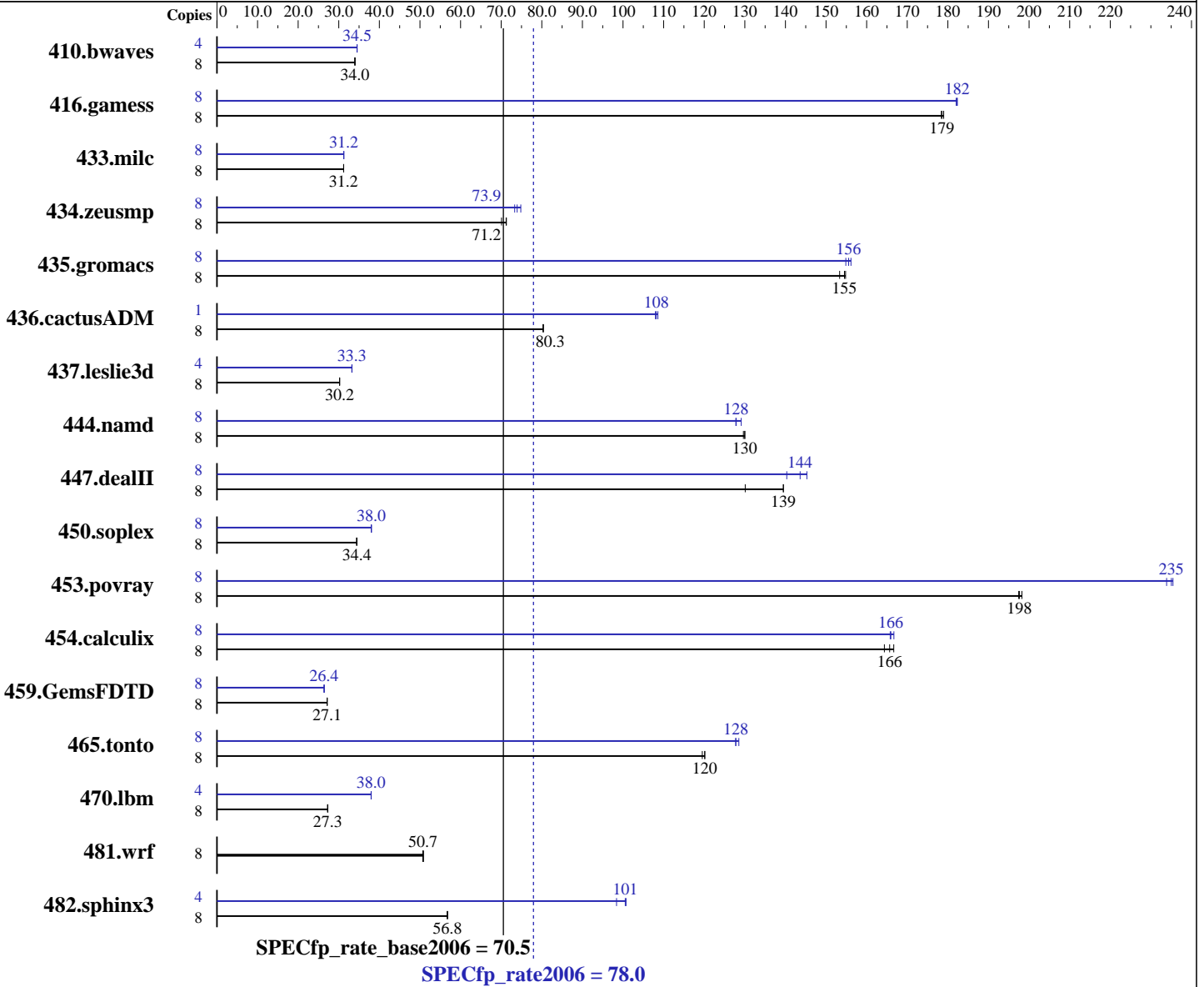
Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Oct-2008

Hardware Availability: Oct-2008

Software Availability: Nov-2008



Hardware

CPU Name: Intel Xeon E5450
 CPU Characteristics: 1333MHz system bus
 CPU MHz: 3000
 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

IBM Corporation

SPECfp_rate2006 = 78.0

IBM System x iDataPlex dx340 (Intel Xeon E5450)

SPECfp_rate_base2006 = 70.5

CPU2006 license: 11

Test date: Oct-2008

Test sponsor: IBM Corporation

Hardware Availability: Oct-2008

Tested by: IBM Corporation

Software Availability: Nov-2008

L3 Cache: None
Other Cache: None
Memory: 16 GB (4 x 4 GB DDR2-5300F ECC)
Disk Subsystem: 1 x 250 GB SATA, 7200 RPM
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	3204	33.9	3197	34.0	<u>3197</u>	<u>34.0</u>	4	1576	34.5	1574	34.5	<u>1575</u>	<u>34.5</u>
416.gamess	8	875	179	<u>877</u>	<u>179</u>	878	178	8	859	182	860	182	<u>859</u>	<u>182</u>
433.milc	8	2354	31.2	<u>2353</u>	<u>31.2</u>	2353	31.2	8	2350	31.2	2351	31.2	<u>2351</u>	<u>31.2</u>
434.zeusmp	8	1021	71.3	<u>1022</u>	<u>71.2</u>	1039	70.1	8	973	74.8	993	73.3	<u>985</u>	<u>73.9</u>
435.gromacs	8	<u>370</u>	<u>155</u>	369	155	372	153	8	<u>367</u>	<u>156</u>	366	156	369	155
436.cactusADM	8	1190	80.3	<u>1190</u>	<u>80.3</u>	1189	80.4	1	110	109	111	108	<u>110</u>	<u>108</u>
437.leslie3d	8	2489	30.2	2489	30.2	<u>2489</u>	<u>30.2</u>	4	1130	33.3	<u>1131</u>	<u>33.3</u>	1132	33.2
444.namd	8	494	130	495	130	<u>494</u>	<u>130</u>	8	497	129	502	128	<u>502</u>	<u>128</u>
447.dealII	8	<u>656</u>	<u>139</u>	703	130	656	139	8	<u>637</u>	<u>144</u>	652	140	630	145
450.soplex	8	1937	34.4	<u>1938</u>	<u>34.4</u>	1939	34.4	8	<u>1754</u>	<u>38.0</u>	1754	38.0	1756	38.0
453.povray	8	<u>215</u>	<u>198</u>	215	198	216	197	8	<u>181</u>	<u>235</u>	181	235	182	234
454.calculix	8	396	167	<u>398</u>	<u>166</u>	402	164	8	<u>398</u>	<u>166</u>	398	166	396	167
459.GemsFDTD	8	3127	27.1	<u>3128</u>	<u>27.1</u>	3128	27.1	8	<u>3216</u>	<u>26.4</u>	3215	26.4	3216	26.4
465.tonto	8	659	120	655	120	<u>655</u>	<u>120</u>	8	616	128	612	129	<u>616</u>	<u>128</u>
470.lbm	8	4032	27.3	4029	27.3	<u>4029</u>	<u>27.3</u>	4	1446	38.0	<u>1447</u>	<u>38.0</u>	1448	38.0
481.wrf	8	1757	50.9	1763	50.7	<u>1761</u>	<u>50.7</u>	8	1757	50.9	1763	50.7	<u>1761</u>	<u>50.7</u>
482.sphinx3	8	<u>2747</u>	<u>56.8</u>	2746	56.8	2750	56.7	4	<u>775</u>	<u>101</u>	774	101	792	98.4

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.
taskset was used to bind processes to cores except for 436.cactusADM peak

General Notes

OMP_NUM_THREADS set to number of processors
KMP_AFFINITY set to "physical,0"
KMP_STACKSIZE set to 64M
Hardware Prefetch Enabled and Adjacent Sector Prefetch Disabled
Memory configuration set to "Performance Optimized"
'ulimit -s unlimited' was used to set the stack size to unlimited prior to run



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECfp_rate2006 = 78.0

IBM System x iDataPlex dx340 (Intel Xeon E5450)

SPECfp_rate_base2006 = 70.5

CPU2006 license: 11

Test date: Oct-2008

Test sponsor: IBM Corporation

Hardware Availability: Oct-2008

Tested by: IBM Corporation

Software Availability: Nov-2008

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.lelie3d: -DSPEC_CPU_LP64
 444.namd: -DSPEC_CPU_LP64
 447.dealII: -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

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



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECfp_rate2006 = 78.0

IBM System x iDataPlex dx340 (Intel Xeon E5450)

SPECfp_rate_base2006 = 70.5

CPU2006 license: 11

Test date: Oct-2008

Test sponsor: IBM Corporation

Hardware Availability: Oct-2008

Tested by: IBM Corporation

Software Availability: Nov-2008

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.deallI: -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

Peak Optimization Flags

C benchmarks:

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECfp_rate2006 = 78.0

IBM System x iDataPlex dx340 (Intel Xeon E5450)

SPECfp_rate_base2006 = 70.5

CPU2006 license: 11

Test date: Oct-2008

Test sponsor: IBM Corporation

Hardware Availability: Oct-2008

Tested by: IBM Corporation

Software Availability: Nov-2008

Peak Optimization Flags (Continued)

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.dealIII: -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

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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECfp_rate2006 = 78.0

IBM System x iDataPlex dx340 (Intel Xeon E5450)

SPECfp_rate_base2006 = 70.5

CPU2006 license: 11

Test date: Oct-2008

Test sponsor: IBM Corporation

Hardware Availability: Oct-2008

Tested by: IBM Corporation

Software Availability: Nov-2008

Peak Optimization Flags (Continued)

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

481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090713.17.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090713.17.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 21:52:09 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 26 November 2008.