



SPEC[®] CFP2006 Result

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IBM Corporation

SPECfp[®]_rate2006 = 64.7

IBM System x3550 (Intel Xeon X5365)

SPECfp_rate_base2006 = 61.0

CPU2006 license: 11

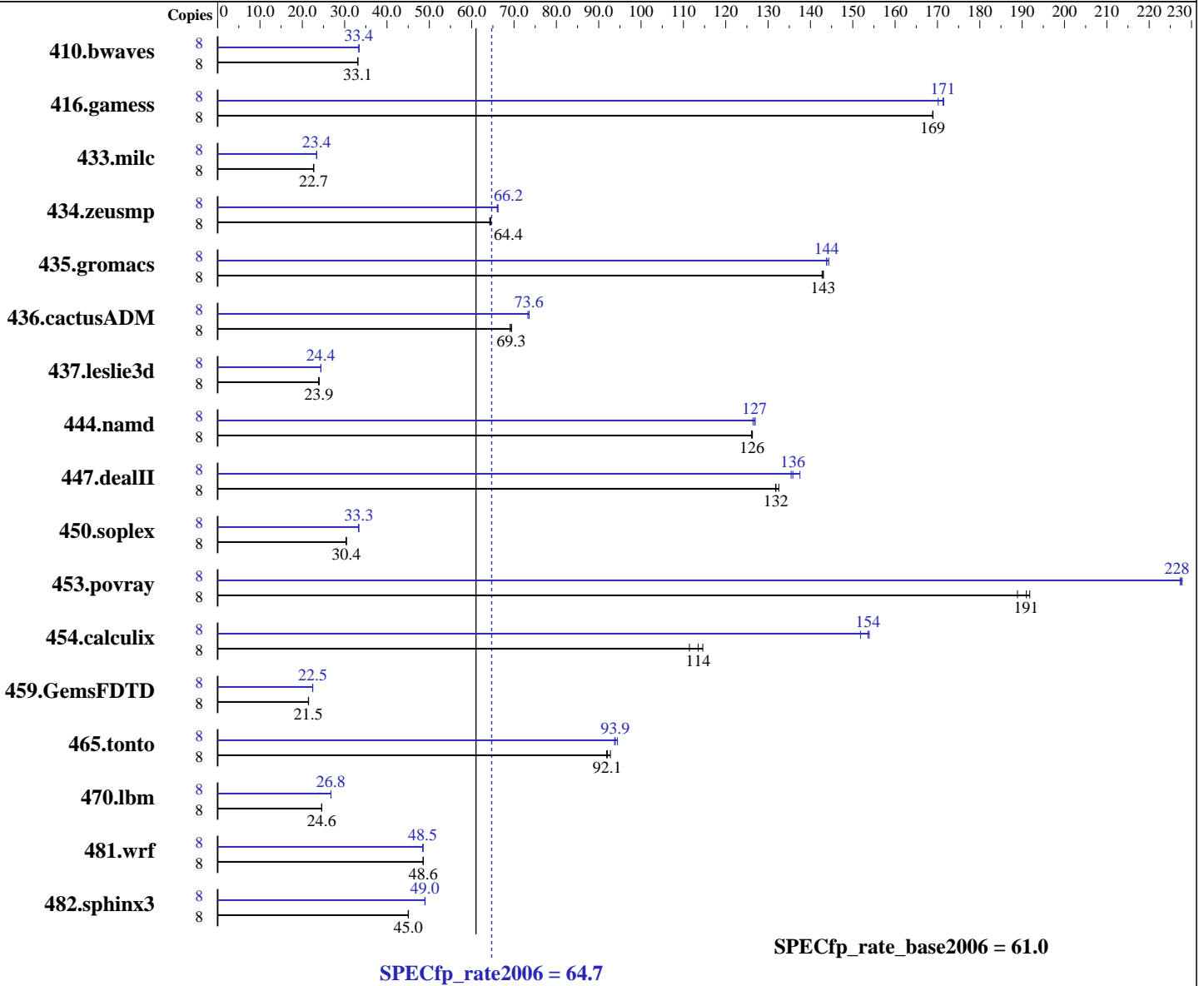
Test date: Aug-2007

Test sponsor: IBM Corporation

Hardware Availability: Sep-2007

Tested by: IBM Corporation

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon X5365
 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: 8 MB I+D on chip per chip, 4 MB shared / 2 cores

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Software

Operating System: SLES 10 (x86_64), 2.6.16.21-0.8-smp
 Compiler: Intel C++ and Fortran Compiler for Linux version 10.1 Build 20070725
 Auto Parallel: No
 File System: ReiserFS
 System State: Multi-user, run level 3
 Base Pointers: 64-bit

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L3 Cache: None
Other Cache: None
Memory: 16 GB (8 x 2 GB DDR2-5300F ECC)
Disk Subsystem: 1 x 36 GB SAS, 15000 RPM
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
410.bwaves	8	3283	33.1	<u>3284</u>	<u>33.1</u>	3285	33.1	8	3257	33.4	<u>3257</u>	<u>33.4</u>	3258	33.4		
416.gamess	8	927	169	928	169	<u>927</u>	<u>169</u>	8	<u>914</u>	<u>171</u>	920	170	913	171		
433.milc	8	3233	22.7	<u>3239</u>	<u>22.7</u>	3246	22.6	8	3139	23.4	<u>3139</u>	<u>23.4</u>	3140	23.4		
434.zeusmp	8	1129	64.5	1133	64.3	<u>1131</u>	<u>64.4</u>	8	<u>1100</u>	<u>66.2</u>	1103	66.0	1100	66.2		
435.gromacs	8	<u>400</u>	<u>143</u>	400	143	399	143	8	396	144	397	144	<u>397</u>	<u>144</u>		
436.cactusADM	8	1377	69.4	<u>1379</u>	<u>69.3</u>	1384	69.1	8	<u>1300</u>	<u>73.6</u>	1299	73.6	1305	73.3		
437.leslie3d	8	3132	24.0	3152	23.9	<u>3144</u>	<u>23.9</u>	8	<u>3085</u>	<u>24.4</u>	3086	24.4	3081	24.4		
444.namd	8	<u>508</u>	<u>126</u>	508	126	509	126	8	505	127	<u>506</u>	<u>127</u>	507	126		
447.dealII	8	690	133	695	132	<u>694</u>	<u>132</u>	8	676	135	665	138	<u>674</u>	<u>136</u>		
450.soplex	8	<u>2196</u>	<u>30.4</u>	2197	30.4	2195	30.4	8	2002	33.3	2005	33.3	<u>2002</u>	<u>33.3</u>		
453.povray	8	<u>223</u>	<u>191</u>	222	192	225	189	8	187	228	<u>187</u>	<u>228</u>	187	227		
454.calculix	8	592	111	576	115	<u>581</u>	<u>114</u>	8	435	152	<u>430</u>	<u>154</u>	429	154		
459.GemsFDTD	8	3950	21.5	3960	21.4	<u>3957</u>	<u>21.5</u>	8	3784	22.4	<u>3779</u>	<u>22.5</u>	3778	22.5		
465.tonto	8	857	91.9	849	92.8	<u>855</u>	<u>92.1</u>	8	<u>838</u>	<u>93.9</u>	840	93.8	834	94.4		
470.lbm	8	4472	24.6	<u>4472</u>	<u>24.6</u>	4472	24.6	8	<u>4107</u>	<u>26.8</u>	4107	26.8	4107	26.8		
481.wrf	8	1841	48.5	<u>1840</u>	<u>48.6</u>	1840	48.6	8	<u>1844</u>	<u>48.5</u>	1841	48.5	1845	48.4		
482.sphinx3	8	3464	45.0	3459	45.1	<u>3462</u>	<u>45.0</u>	8	3185	49.0	3181	49.0	<u>3184</u>	<u>49.0</u>		

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

General Notes

taskset utility used to bind CPU(s) to processes

Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

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Base Compiler Invocation (Continued)

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.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:

-fast

C++ benchmarks:

-fast

Fortran benchmarks:

-fast

Benchmarks using both Fortran and C:

-fast

Peak Compiler Invocation

C benchmarks (except as noted below):

```

/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include

```

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Peak Compiler Invocation (Continued)

433.milc: icc

C++ benchmarks (except as noted below):

icpc

450.soplex: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icpc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include

Fortran benchmarks (except as noted below):

ifort

437.leslie3d: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/ifort
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/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
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -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) -fast -fno-alias
-auto-ilp32

470.lbm: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-scalar-rep- -prefetch -opt-malloc-options=3

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Peak Optimization Flags (Continued)

482.sphinx3: -fast -unroll2

C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias
-auto-ilp32

447.dealIII: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-ansi-alias -scalar-rep-

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -fast
-opt-malloc-options=3

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4
-ansi-alias

Fortran benchmarks:

410.bwaves: -fast -prefetch

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0
-ansi-alias -scalar-rep-

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -fast

437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-opt-malloc-options=3

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0
-prefetch

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto

Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-auto-ilp32

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-prefetch -auto-ilp32

454.calculix: -fast -unroll-aggressive -auto-ilp32

481.wrf: -fast -auto-ilp32

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

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.21.html>



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

<http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.21.xml>

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Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 14:55:01 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 16 October 2007.