



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SuperServer 2027R-72RFTP+ (X9DRW-7TPF+, Intel Xeon E5-2690)

SPECfp[®]2006 = **91.4**

SPECfp_base2006 = **86.4**

CPU2006 license: 001176

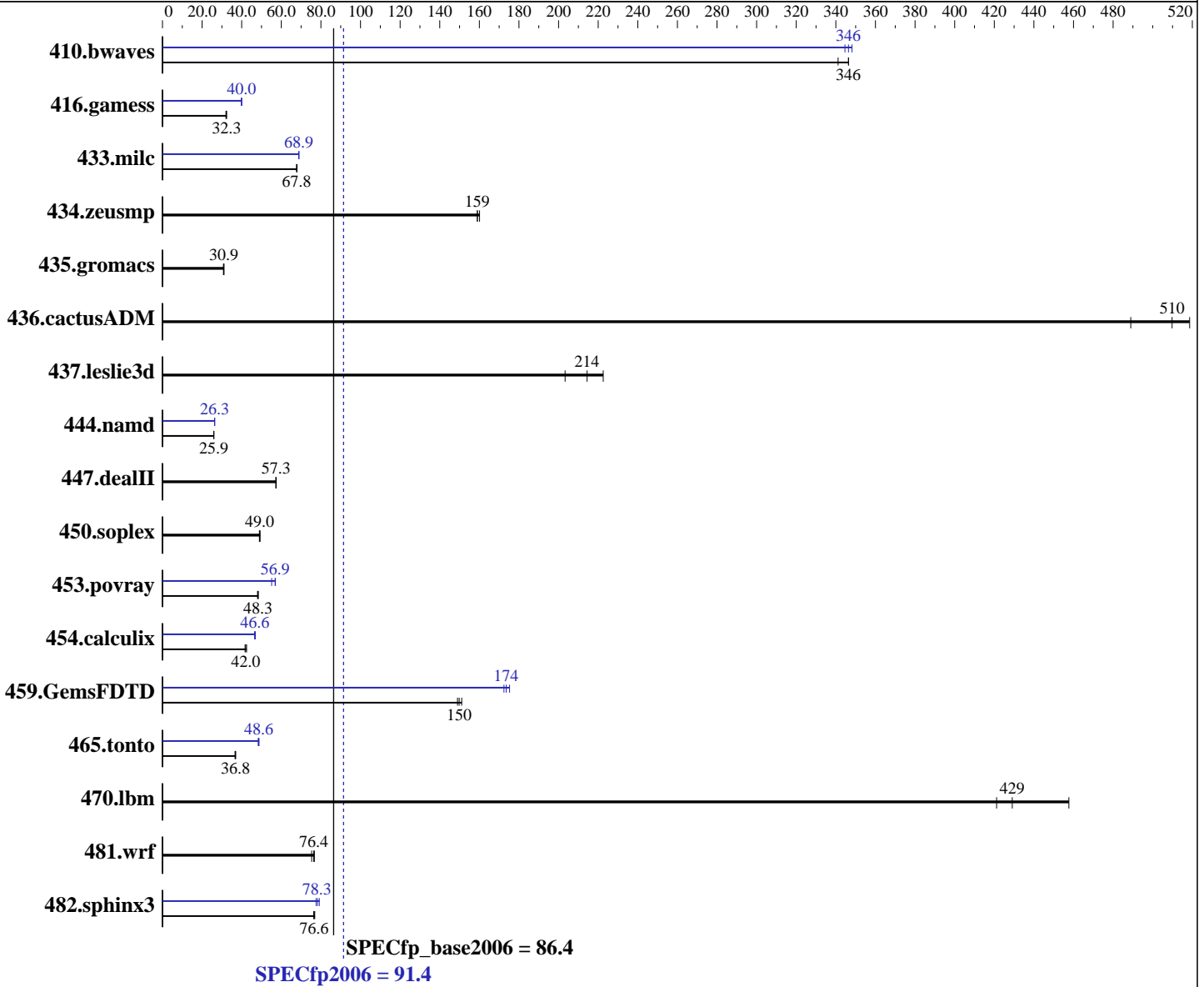
Test sponsor: Supermicro

Tested by: Supermicro

Test date: Mar-2013

Hardware Availability: Feb-2013

Software Availability: Oct-2011



Hardware

CPU Name: Intel Xeon E5-2690
 CPU Characteristics: Intel Turbo Boost Technology up to 3.80 GHz
 CPU MHz: 2900
 FPU: Integrated
 CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core

Continued on next page

Software

Operating System: Red Hat Enterprise Linux Server Release 6.1, Kernel 2.6.32-131.0.15.el6.x86_64
 Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux;
 Fortran: Version 12.1.0.225 of Intel Fortran Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4
 System State: Run level 3 (multi-user)

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SuperServer 2027R-72RFTP+ (X9DRW-7TPF+, Intel Xeon E5-2690)

SPECfp2006 = **91.4**

SPECfp_base2006 = **86.4**

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Mar-2013

Hardware Availability: Feb-2013

Software Availability: Oct-2011

L3 Cache: 20 MB I+D on chip per chip
Other Cache: None
Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem: 1 x Toshiba MBF2600RC
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: none

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	<u>39.2</u>	<u>346</u>	39.8	341	39.2	346	<u>39.2</u>	<u>346</u>	39.0	348	39.4	345
416.gamess	<u>606</u>	<u>32.3</u>	606	32.3	611	32.0	490	40.0	<u>490</u>	<u>40.0</u>	492	39.8
433.milc	135	67.9	135	67.8	<u>135</u>	<u>67.8</u>	<u>133</u>	<u>68.9</u>	133	68.9	133	68.8
434.zeusmp	56.8	160	<u>57.2</u>	<u>159</u>	57.2	159	56.8	160	<u>57.2</u>	<u>159</u>	57.2	159
435.gromacs	232	30.8	<u>231</u>	<u>30.9</u>	230	31.1	232	30.8	<u>231</u>	<u>30.9</u>	230	31.1
436.cactusADM	24.4	489	23.0	519	<u>23.4</u>	<u>510</u>	24.4	489	23.0	519	<u>23.4</u>	<u>510</u>
437.leslie3d	<u>43.8</u>	<u>214</u>	42.2	223	46.2	203	<u>43.8</u>	<u>214</u>	42.2	223	46.2	203
444.namd	309	25.9	309	25.9	<u>309</u>	<u>25.9</u>	304	26.3	<u>304</u>	<u>26.3</u>	304	26.4
447.dealII	199	57.4	200	57.3	<u>200</u>	<u>57.3</u>	199	57.4	200	57.3	<u>200</u>	<u>57.3</u>
450.soplex	<u>170</u>	<u>49.0</u>	170	48.9	169	49.3	<u>170</u>	<u>49.0</u>	170	48.9	169	49.3
453.povray	110	48.4	111	48.0	<u>110</u>	<u>48.3</u>	96.5	55.1	<u>93.5</u>	<u>56.9</u>	93.3	57.0
454.calculix	194	42.5	<u>196</u>	<u>42.0</u>	198	41.7	176	46.9	177	46.5	<u>177</u>	<u>46.6</u>
459.GemsFDTD	71.2	149	70.2	151	<u>70.8</u>	<u>150</u>	61.5	172	60.5	175	<u>61.1</u>	<u>174</u>
465.tonto	269	36.6	266	37.0	<u>267</u>	<u>36.8</u>	204	48.3	<u>202</u>	<u>48.6</u>	202	48.7
470.lbm	32.6	421	<u>32.0</u>	<u>429</u>	30.0	458	32.6	421	<u>32.0</u>	<u>429</u>	30.0	458
481.wrf	<u>146</u>	<u>76.4</u>	148	75.3	146	76.7	<u>146</u>	<u>76.4</u>	148	75.3	146	76.7
482.sphinx3	255	76.4	253	76.9	<u>254</u>	<u>76.6</u>	251	77.6	246	79.2	<u>249</u>	<u>78.3</u>

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

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

General Notes

Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64"
OMP_NUM_THREADS = "16"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SuperServer 2027R-72RFTP+ (X9DRW-7TPF+, Intel Xeon E5-2690)

SPECfp2006 = 91.4

SPECfp_base2006 = 86.4

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

Test date: Mar-2013
Hardware Availability: Feb-2013
Software Availability: Oct-2011

Base Compiler Invocation

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64

Fortran benchmarks:
ifort -m64

Benchmarks using both Fortran and C:
icc -m64 ifort -m64

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:
-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias

C++ benchmarks:
-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias

Fortran benchmarks:
-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:
-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SuperServer 2027R-72RFTP+ (X9DRW-7TPF+, Intel Xeon E5-2690)

SPECfp2006 = 91.4

SPECfp_base2006 = 86.4

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

Test date: Mar-2013
Hardware Availability: Feb-2013
Software Availability: Oct-2011

Peak Compiler Invocation

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64

Fortran benchmarks:
ifort -m64

Benchmarks using both Fortran and C:
icc -m64 ifort -m64

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32
-ansi-alias

470.lbm: basepeak = yes

482.sphinx3: -xAVX -ipo -O3 -no-prec-div -unroll2 -ansi-alias
-parallel

C++ benchmarks:

444.namd: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -fno-alias
-auto-ilp32

447.dealIII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -parallel
-static

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SuperServer 2027R-72RFTP+ (X9DRW-7TPF+, Intel Xeon E5-2690)

SPECfp2006 = 91.4

SPECfp_base2006 = 86.4

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Mar-2013

Hardware Availability: Feb-2013

Software Availability: Oct-2011

Peak Optimization Flags (Continued)

416.gamess: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2
-inline-level=0 -scalar-rep- -static

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2
-inline-level=0 -opt-prefetch -parallel

465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc
-opt-malloc-options=3 -auto -unroll4

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: -xAVX -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias

481.wrf: basepeak = yes

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

<http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-revA.html>

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html>

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

<http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-revA.xml>

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.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 v1.2.
Report generated on Thu Jul 24 14:13:59 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 26 March 2013.