



SPEC[®] CFP2006 Result

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Supermicro

SPECfp[®]2006 = **68.5**

SuperServer 1017C-TF (X9SCL-F, Intel E3-1230V2)

SPECfp_base2006 = **66.6**

CPU2006 license: 001176

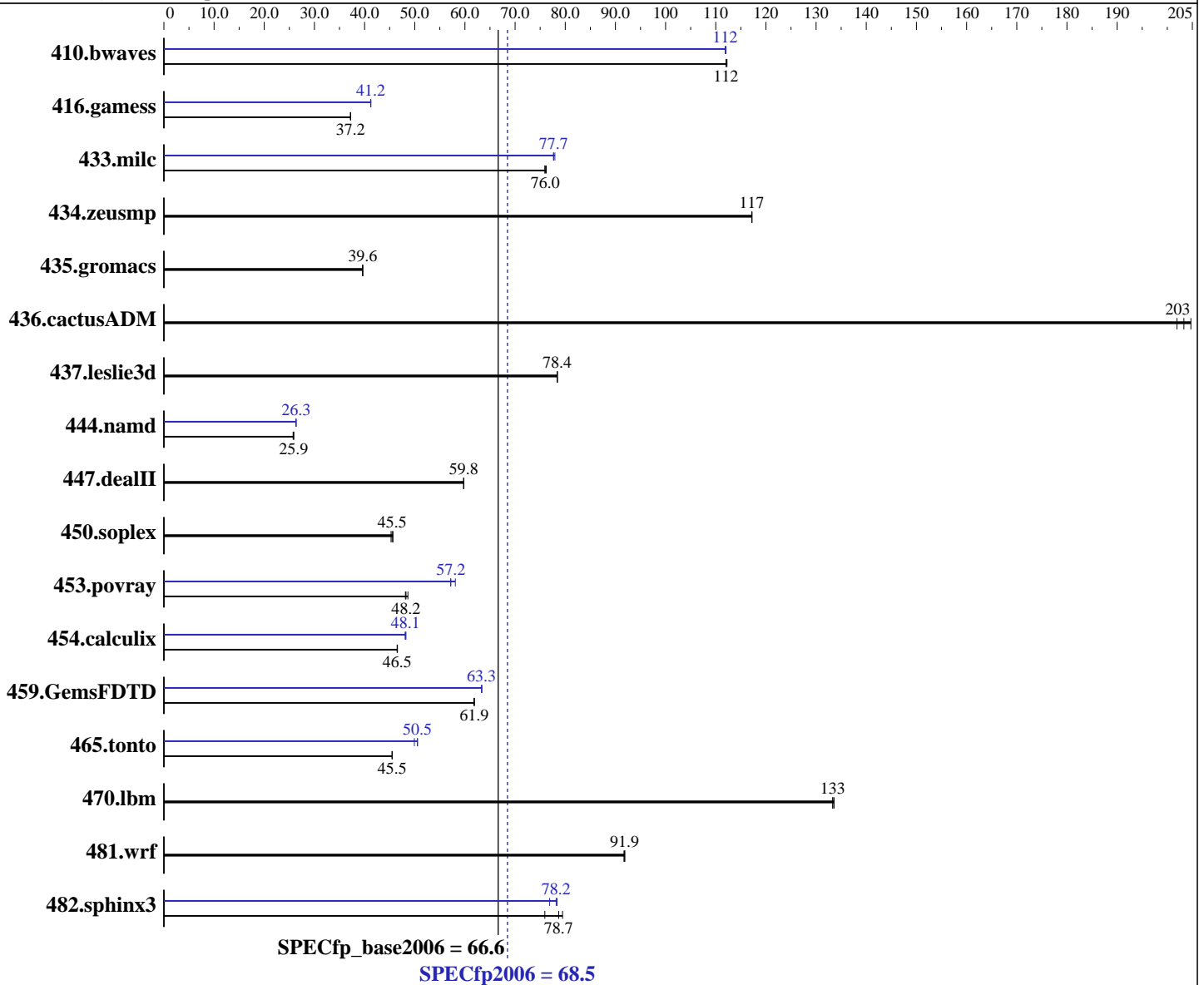
Test date: May-2012

Test sponsor: Supermicro

Hardware Availability: May-2012

Tested by: Supermicro

Software Availability: Dec-2011



Hardware

CPU Name: Intel Xeon E3-1230 v2
 CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz
 CPU MHz: 3300
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 1 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core

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Software

Operating System: Red Hat Enterprise Linux Server release 6.2 (Santiago), Kernel 2.6.32-220.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

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L3 Cache: 8 MB I+D on chip per chip
 Other Cache: None
 Memory: 16 GB (2 x 8 GB 2Rx8 PC3-12800E-11, ECC)
 Disk Subsystem: 1 x 500 GB SATA II, 7200 RPM
 Other Hardware: None

System State: Run level 3 (multi-user)
 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	121	112	121	112	<u>121</u>	<u>112</u>	<u>121</u>	<u>112</u>	121	112	121	112
416.gamess	526	37.2	<u>526</u>	<u>37.2</u>	526	37.2	475	41.2	<u>475</u>	<u>41.2</u>	475	41.2
433.milc	<u>121</u>	<u>76.0</u>	121	75.9	120	76.2	118	77.9	118	77.7	<u>118</u>	<u>77.7</u>
434.zeusmp	<u>77.6</u>	<u>117</u>	77.6	117	77.6	117	<u>77.6</u>	<u>117</u>	77.6	117	77.6	117
435.gromacs	180	39.6	180	39.6	<u>180</u>	<u>39.6</u>	180	39.6	180	39.6	<u>180</u>	<u>39.6</u>
436.cactusADM	58.4	205	<u>58.8</u>	<u>203</u>	59.2	202	58.4	205	<u>58.8</u>	<u>203</u>	59.2	202
437.leslie3d	120	78.4	120	78.4	<u>120</u>	<u>78.4</u>	120	78.4	120	78.4	<u>120</u>	<u>78.4</u>
444.namd	311	25.8	310	25.9	<u>310</u>	<u>25.9</u>	304	26.3	305	26.3	<u>304</u>	<u>26.3</u>
447.dealII	191	59.8	192	59.7	<u>191</u>	<u>59.8</u>	191	59.8	192	59.7	<u>191</u>	<u>59.8</u>
450.soplex	184	45.3	183	45.7	<u>183</u>	<u>45.5</u>	184	45.3	183	45.7	<u>183</u>	<u>45.5</u>
453.povray	111	48.1	109	48.6	<u>110</u>	<u>48.2</u>	91.6	58.1	<u>93.0</u>	<u>57.2</u>	93.1	57.1
454.calculix	<u>177</u>	<u>46.5</u>	177	46.6	177	46.5	171	48.2	171	48.1	<u>171</u>	<u>48.1</u>
459.GemsFDTD	172	61.8	171	61.9	<u>171</u>	<u>61.9</u>	<u>168</u>	<u>63.3</u>	167	63.4	168	63.3
465.tonto	<u>216</u>	<u>45.5</u>	217	45.4	216	45.5	<u>195</u>	<u>50.5</u>	197	49.9	195	50.6
470.lbm	<u>103</u>	<u>133</u>	103	134	103	133	<u>103</u>	<u>133</u>	103	134	103	133
481.wrf	<u>122</u>	<u>91.9</u>	122	91.9	122	91.7	<u>122</u>	<u>91.9</u>	122	91.9	122	91.7
482.sphinx3	257	75.9	245	79.5	<u>248</u>	<u>78.7</u>	<u>249</u>	<u>78.2</u>	249	78.4	253	76.9

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"
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled

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 = "4"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
 memory using RHEL5.5



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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.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:
-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
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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

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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/Intel-ic12.1-official-linux64.20120425.html>

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

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120425.xml>

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

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For other inquiries, please contact webmaster@spec.org.

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