



SPEC® CFP2006 Result

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Supermicro

SuperServer 6017R-TDF (X9DRD-iF, Intel Xeon E5-2667)

SPECfp®2006 = 83.1

SPECfp_base2006 = 79.1

CPU2006 license: 001176

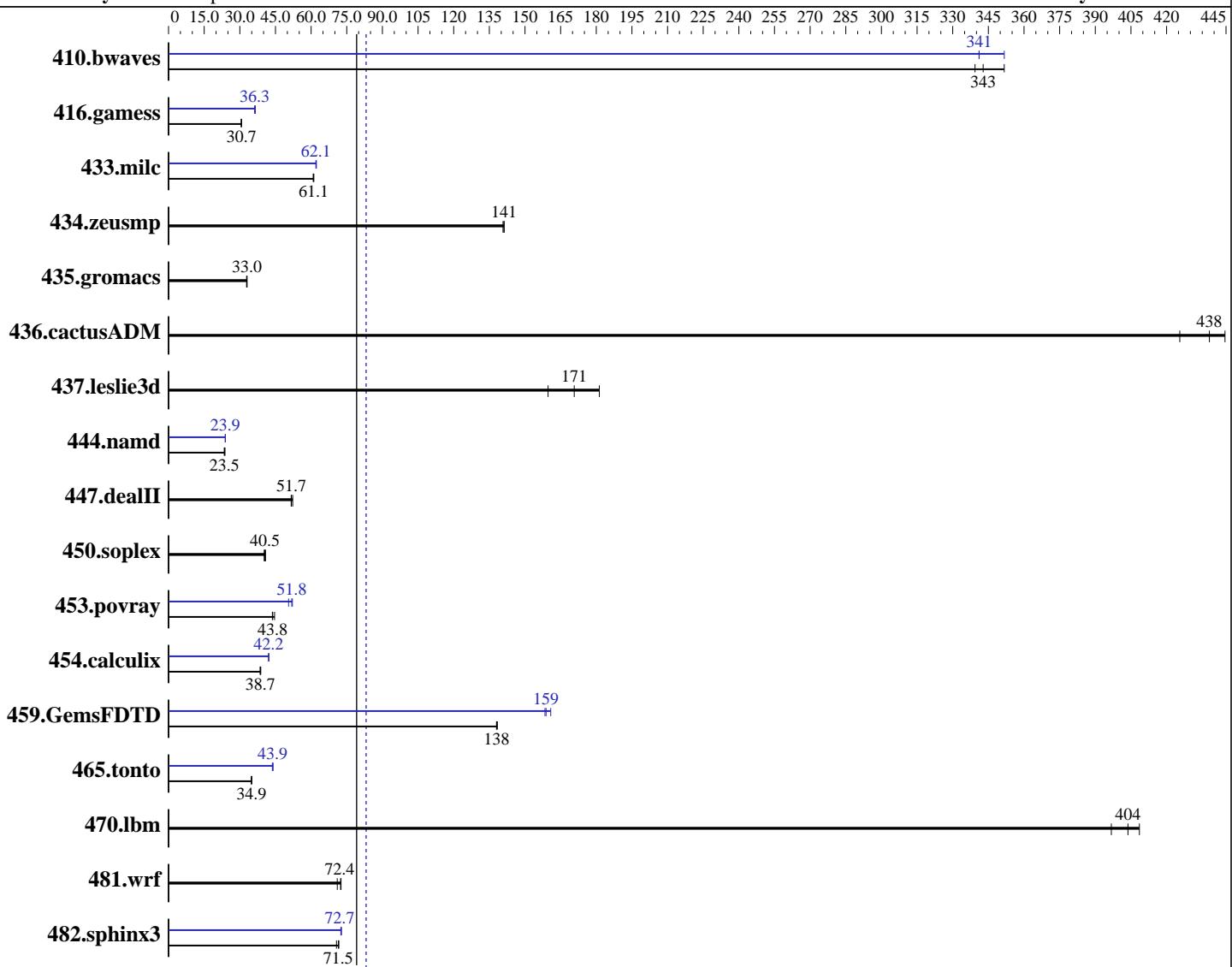
Test sponsor: Supermicro

Tested by: Supermicro

Test date: May-2012

Hardware Availability: Mar-2012

Software Availability: Dec-2011



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Hardware

CPU Name: Intel Xeon E5-2667
CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz
CPU MHz: 2900
FPU: Integrated
CPU(s) enabled: 12 cores, 2 chips, 6 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

Software

Operating System: Red Hat Enterprise Linux Server Release 6.2, 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
System State: Run level 3 (multi-user)

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L3 Cache: 15 MB I+D on chip per chip
 Other Cache: None
 Memory: 64 GB (8 x 8 GB 2Rx4 PC3-12800R-11, ECC)
 Disk Subsystem: 1 x 600 GB SATA III, 10000 RPM
 Other Hardware: None

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

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio										
410.bwaves	38.6	352	40.0	339	<u>39.6</u>	<u>343</u>	<u>39.8</u>	<u>341</u>	39.8	341	38.6	352
416.gamess	640	30.6	<u>638</u>	<u>30.7</u>	638	30.7	<u>536</u>	<u>36.5</u>	<u>539</u>	<u>36.3</u>	540	36.3
433.milc	151	60.9	150	61.1	<u>150</u>	<u>61.1</u>	148	62.2	148	62.0	<u>148</u>	<u>62.1</u>
434.zeusmp	64.5	141	64.7	141	<u>64.5</u>	<u>141</u>	64.5	141	64.7	141	<u>64.5</u>	<u>141</u>
435.gromacs	217	32.8	<u>216</u>	<u>33.0</u>	216	33.0	217	32.8	<u>216</u>	<u>33.0</u>	216	33.0
436.cactusADM	26.9	445	<u>27.3</u>	<u>438</u>	28.1	426	26.9	445	<u>27.3</u>	<u>438</u>	28.1	426
437.leslie3d	58.9	160	51.9	181	<u>55.1</u>	<u>171</u>	58.9	160	51.9	181	<u>55.1</u>	<u>171</u>
444.namd	338	23.8	341	23.5	<u>341</u>	<u>23.5</u>	335	23.9	<u>336</u>	<u>23.9</u>	336	23.9
447.dealII	219	52.2	<u>221</u>	<u>51.7</u>	222	51.6	219	52.2	<u>221</u>	<u>51.7</u>	222	51.6
450.soplex	204	40.8	<u>206</u>	<u>40.5</u>	207	40.2	204	40.8	<u>206</u>	<u>40.5</u>	207	40.2
453.povray	<u>121</u>	<u>43.8</u>	119	44.6	122	43.7	<u>103</u>	<u>51.8</u>	105	50.5	102	52.1
454.calculix	214	38.5	213	38.8	<u>213</u>	<u>38.7</u>	196	42.2	<u>196</u>	<u>42.2</u>	196	42.1
459.GemsFDTD	<u>76.9</u>	<u>138</u>	76.7	138	76.9	138	66.0	161	<u>66.8</u>	<u>159</u>	67.0	158
465.tonto	282	34.8	281	35.0	<u>282</u>	<u>34.9</u>	224	44.0	<u>224</u>	<u>43.9</u>	225	43.7
470.lbm	33.6	409	<u>34.0</u>	<u>404</u>	34.6	397	33.6	409	<u>34.0</u>	<u>404</u>	34.6	397
481.wrf	157	71.0	154	72.6	<u>154</u>	<u>72.4</u>	157	71.0	154	72.6	<u>154</u>	<u>72.4</u>
482.sphinx3	<u>273</u>	<u>71.5</u>	272	71.7	276	70.7	<u>269</u>	<u>72.5</u>	268	<u>72.7</u>	<u>268</u>	<u>72.7</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 = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64"

OMP_NUM_THREADS = "12"

Binaries compiled on a system with 2 x Xeon E5-2690 CPU + 64GB memory using RHEL6.2

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled



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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.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



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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 -unroll12 -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.dealII: 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) -unroll14 -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 file that was used to format this result can be browsed at

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

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

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

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

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