SPEC® CFP2006 Result

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Supermicro

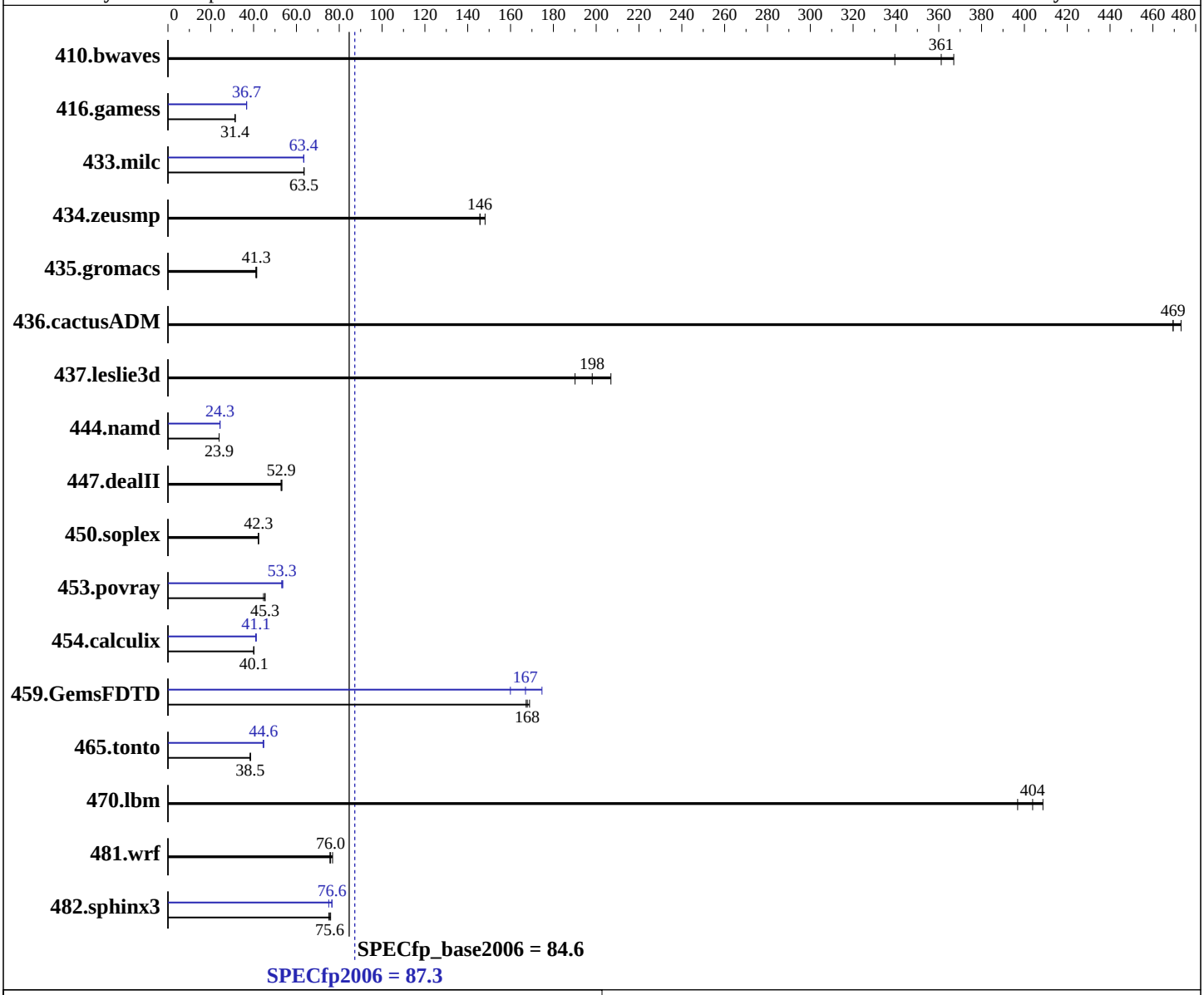
SuperServer 6017TR-TQF (X9DRT-IBQF,
Intel Xeon E5-2667, 2.90 GHz)

SPECfp®2006 = 87.3

SPECfp_base2006 = 84.6

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

Test date: Apr-2013
Hardware Availability: Mar-2012
Software Availability: Oct-2012



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

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Software

Operating System:	Red Hat Enterprise Linux Server Release 6.2, Kernel 2.6.32-220.el6.x86_64
Compiler:	C/C++: Version 13.0.0.133 of Intel C++ Studio XE for Linux; Fortran: Version 13.0.0.133 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 1 TB SATA II, 7200 RPM
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	**37.6**	**361**	40.0	339	37.0	367	**37.6**	**361**	40.0	339	37.0	367
416.gamess	**625**	**31.4**	623	31.4	625	31.3	**533**	**36.7**	533	36.7	533	36.8
433.milc	144	63.6	**144**	**63.5**	145	63.5	145	63.5	145	63.4	**145**	**63.4**
434.zeusmp	62.4	146	**62.4**	**146**	61.4	148	62.4	146	**62.4**	**146**	61.4	148
435.gromacs	172	41.5	174	41.0	**173**	**41.3**	172	41.5	174	41.0	**173**	**41.3**
436.cactusADM	25.3	473	25.5	469	**25.5**	**469**	25.3	473	25.5	469	**25.5**	**469**
437.leslie3d	**47.4**	**198**	49.4	190	45.4	207	**47.4**	**198**	49.4	190	45.4	207
444.namd	**336**	**23.9**	336	23.9	336	23.9	**330**	**24.3**	330	24.3	330	24.3
447.dealII	216	52.9	215	53.2	**216**	**52.9**	216	52.9	215	53.2	**216**	**52.9**
450.soplex	197	42.3	**197**	**42.3**	198	42.2	197	42.3	**197**	**42.3**	198	42.2
453.povray	119	44.6	117	45.4	**117**	**45.3**	99.2	53.6	100	53.2	**99.8**	**53.3**
454.calculix	206	40.0	**206**	**40.1**	205	40.2	**201**	**41.1**	200	41.2	201	41.0
459.GemsFDTD	62.8	169	**63.2**	**168**	63.4	167	66.3	160	60.7	175	**63.5**	**167**
465.tonto	255	38.5	**256**	**38.5**	256	38.4	**221**	**44.6**	221	44.4	220	44.7
470.lbm	33.6	409	34.6	397	**34.0**	**404**	33.6	409	34.6	397	**34.0**	**404**
481.wrf	**147**	**76.0**	145	76.9	148	75.6	**147**	**76.0**	145	76.9	148	75.6
482.sphinx3	257	76.0	**258**	**75.6**	260	75.1	**255**	**76.6**	260	75.1	255	76.6

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:
LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh"
OMP_NUM_THREADS = "12"

 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
 runspec command invoked through numactl i.e.:
 numactl --interleave=all runspec <etc>
```

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

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.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) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

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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/Supermicro-Platform-Settings-V1.2-revB.20130719.html
http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-V1.2-revB.20130719.xml
http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.xml

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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