SPEC® CFP2006 Result

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Supermicro

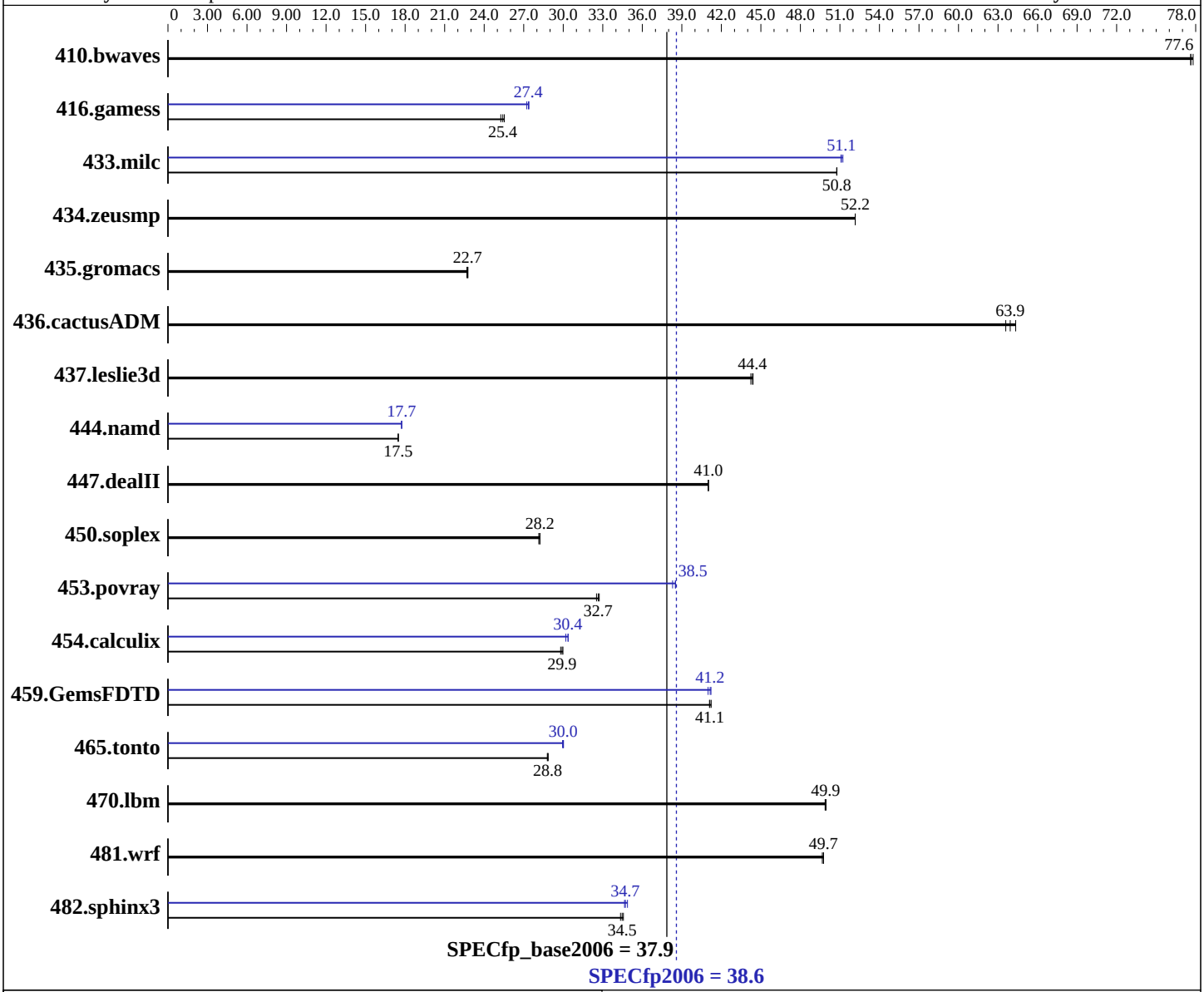
SuperServer 5017C-MF (X9SCL-F, Intel G620)

SPECfp®2006 = 38.6

SPECfp_base2006 = 37.9

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

Test date: Mar-2012
Hardware Availability: Apr-2011
Software Availability: Oct-2011



Hardware

CPU Name:	Intel Pentium G620
CPU Characteristics:	
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
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 6.1, 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)

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L3 Cache: 3 MB I+D on chip per chip
Other Cache: None
Memory: 8 GB (2 x 4 GB 2Rx8 PC3-10600E-9, 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	175	77.6	175	77.8	**175**	**77.6**	175	77.6	175	77.8	**175**	**77.6**
416.gamess	**770**	**25.4**	767	25.5	775	25.3	**716**	**27.4**	719	27.2	715	27.4
433.milc	**181**	**50.8**	181	50.8	181	50.8	**180**	**51.1**	180	51.1	179	51.2
434.zeusmp	174	52.2	174	52.2	**174**	**52.2**	174	52.2	174	52.2	**174**	**52.2**
435.gromacs	**314**	**22.7**	314	22.8	315	22.7	**314**	**22.7**	314	22.8	315	22.7
436.cactusADM	**187**	**63.9**	186	64.3	188	63.6	**187**	**63.9**	186	64.3	188	63.6
437.leslie3d	212	44.2	212	44.4	**212**	**44.4**	212	44.2	212	44.4	**212**	**44.4**
444.namd	**459**	**17.5**	459	17.5	459	17.5	452	17.7	452	17.7	**452**	**17.7**
447.dealII	**279**	**41.0**	279	41.0	279	41.0	**279**	**41.0**	279	41.0	279	41.0
450.soplex	**295**	**28.2**	295	28.2	296	28.1	**295**	**28.2**	295	28.2	296	28.1
453.povray	**163**	**32.7**	163	32.7	164	32.5	138	38.5	139	38.3	**138**	**38.5**
454.calculix	275	30.0	277	29.8	**276**	**29.9**	273	30.2	**272**	**30.4**	272	30.4
459.GemsFDTD	258	41.1	257	41.2	**258**	**41.1**	257	41.2	259	41.0	**258**	**41.2**
465.tonto	341	28.9	**341**	**28.8**	342	28.8	**328**	**30.0**	329	29.9	328	30.0
470.lbm	275	49.9	275	49.9	**275**	**49.9**	275	49.9	275	49.9	**275**	**49.9**
481.wrf	**225**	**49.7**	225	49.8	225	49.7	**225**	**49.7**	225	49.8	225	49.7
482.sphinx3	564	34.6	**565**	**34.5**	567	34.3	559	34.9	**561**	**34.7**	562	34.7

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 = "2"

 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
```

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:
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch -ansi-alias

C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias

Fortran benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:
-xSSE4.2 -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: -xSSE4.2(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: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -ansi-alias -parallel

C++ benchmarks:

444.namd: -xSSE4.2(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: -xSSE4.2(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: `-xSSE4.2`(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: `-xSSE4.2`(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: `-xSSE4.2`(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: `-xSSE4.2 -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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