SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

SGI

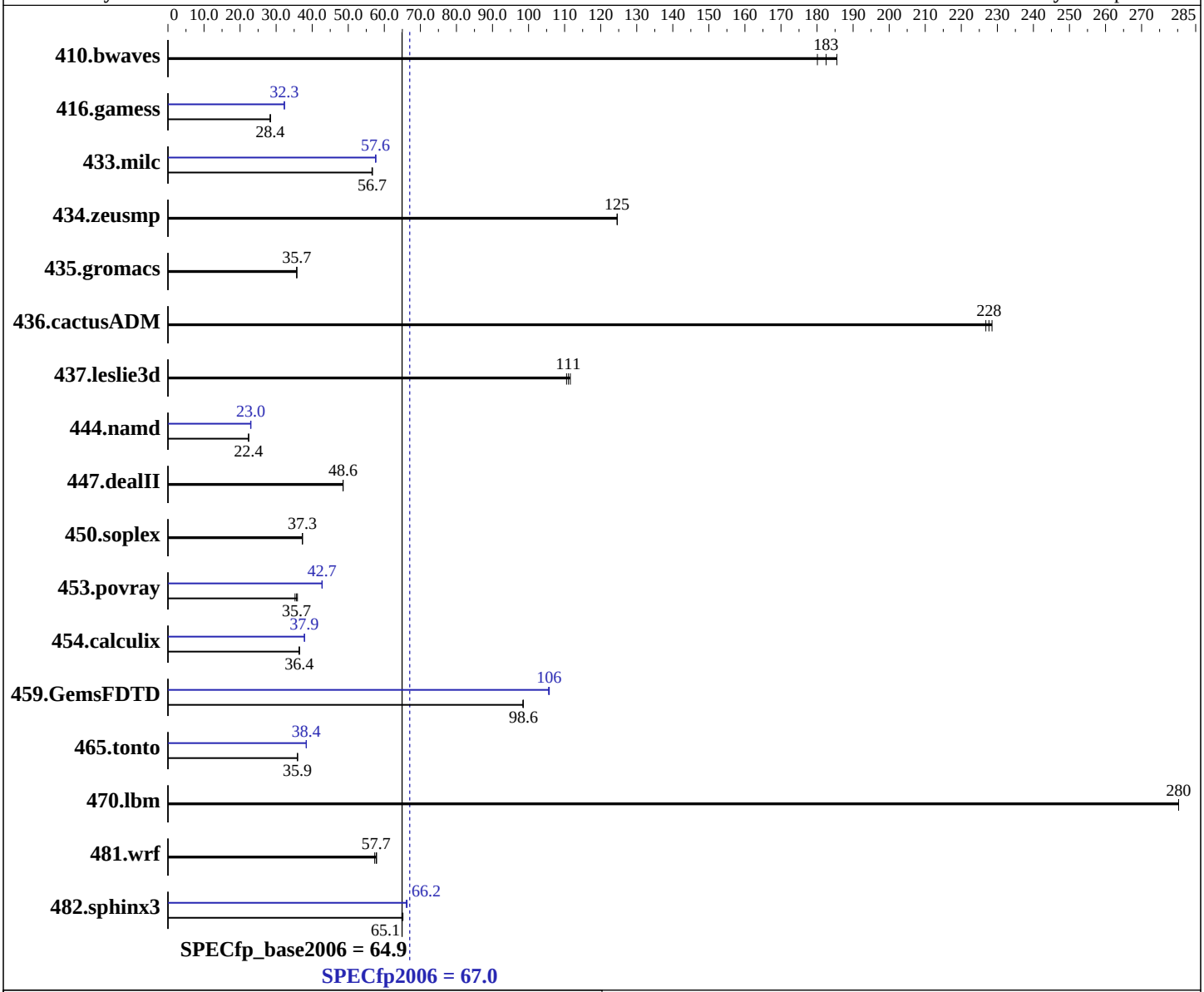
SGI Rackable C2005-TY3 (Intel Xeon X5687, 3.60 GHz)

SPECfp®2006 = 67.0

SPECfp_base2006 = 64.9

CPU2006 license: 4
Test sponsor: SGI
Tested by: SGI

Test date: Aug-2011
Hardware Availability: Feb-2011
Software Availability: Sep-2011



Hardware

CPU Name:	Intel Xeon X5687
CPU Characteristics:	Intel Turbo Boost Technology up to 3.86 GHz
CPU MHz:	3600
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip, 2 threads/core
CPU(s) orderable:	1,2 chip
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:	SUSE Linux Enterprise Server 11 (x86_64) SP1, kernel 2.6.32.36-0.5-default
Compiler:	Intel C++ and Fortran Compiler XE for applications running on IA32 and Intel 64 12.1.0.225 Build 20110803
Auto Parallel:	Yes
File System:	xfs
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit

Continued on next page

SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

SGI

SGI Rackable C2005-TY3 (Intel Xeon X5687, 3.60 GHz)

SPECfp2006 = 67.0

SPECfp_base2006 = 64.9

CPU2006 license: 4
Test sponsor: SGI
Tested by: SGI

Test date: Aug-2011
Hardware Availability: Feb-2011
Software Availability: Sep-2011

L3 Cache: 12 MB I+D on chip per chip
Other Cache: None
Memory: 48 GB (6 x 8 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem: 876 GB RAID 5
6 x 146 GB SAS, 15000 RPM
Other Hardware: None

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	75.5	180	**74.5**	**183**	73.3	186	75.5	180	**74.5**	**183**	73.3	186
416.gamess	688	28.4	**690**	**28.4**	691	28.3	606	32.3	**607**	**32.3**	607	32.3
433.milc	162	56.6	162	56.7	**162**	**56.7**	159	57.7	**159**	**57.6**	160	57.5
434.zeusmp	**73.0**	**125**	73.0	125	73.0	125	**73.0**	**125**	73.0	125	73.0	125
435.gromacs	**200**	**35.7**	200	35.7	200	35.7	**200**	**35.7**	200	35.7	200	35.7
436.cactusADM	52.7	227	**52.5**	**228**	52.3	229	52.7	227	**52.5**	**228**	52.3	229
437.leslie3d	**84.6**	**111**	85.0	111	84.2	112	**84.6**	**111**	85.0	111	84.2	112
444.namd	**359**	**22.4**	358	22.4	359	22.4	**349**	**23.0**	349	23.0	350	22.9
447.dealII	236	48.6	**236**	**48.6**	236	48.6	236	48.6	**236**	**48.6**	236	48.6
450.soplex	224	37.3	224	37.3	**224**	**37.3**	224	37.3	224	37.3	**224**	**37.3**
453.povray	148	35.9	151	35.2	**149**	**35.7**	125	42.7	124	42.8	**124**	**42.7**
454.calculix	226	36.5	227	36.4	**227**	**36.4**	218	37.9	**218**	**37.9**	218	37.8
459.GemsFDTD	108	98.4	108	98.6	**108**	**98.6**	**100**	**106**	101	106	100	106
465.tonto	**274**	**35.9**	274	35.9	274	35.9	256	38.4	**257**	**38.4**	257	38.3
470.lbm	49.0	280	**49.0**	**280**	49.0	280	49.0	280	**49.0**	**280**	49.0	280
481.wrf	193	57.9	195	57.3	**193**	**57.7**	193	57.9	195	57.3	**193**	**57.7**
482.sphinx3	299	65.2	**299**	**65.1**	300	64.9	295	66.1	**294**	**66.2**	294	66.3

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

General Notes

```
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/scratch/cma/cpu2006-1.1/smartheap:/scratch/cma/cpu2006-1.1/ic12.1-libs/ia32/:/scratch/cma/cpu2006-1.1/ic12.1-libs/intel64"
OMP_NUM_THREADS = "8"

 Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory
 using RHEL5.5 with binutils-2.17.50.0.6-14.el5
 Stack size set to unlimited using "ulimit -s unlimited"
```

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

Continued on next page

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 files that were used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic12.1-linux64.html`
`http://www.spec.org/cpu2006/flags/platform.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2006/flags/Intel-ic12.1-linux64.xml`
`http://www.spec.org/cpu2006/flags/platform.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 v1.1.
Report generated on Wed Jul 23 22:42:51 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 13 September 2011.