SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

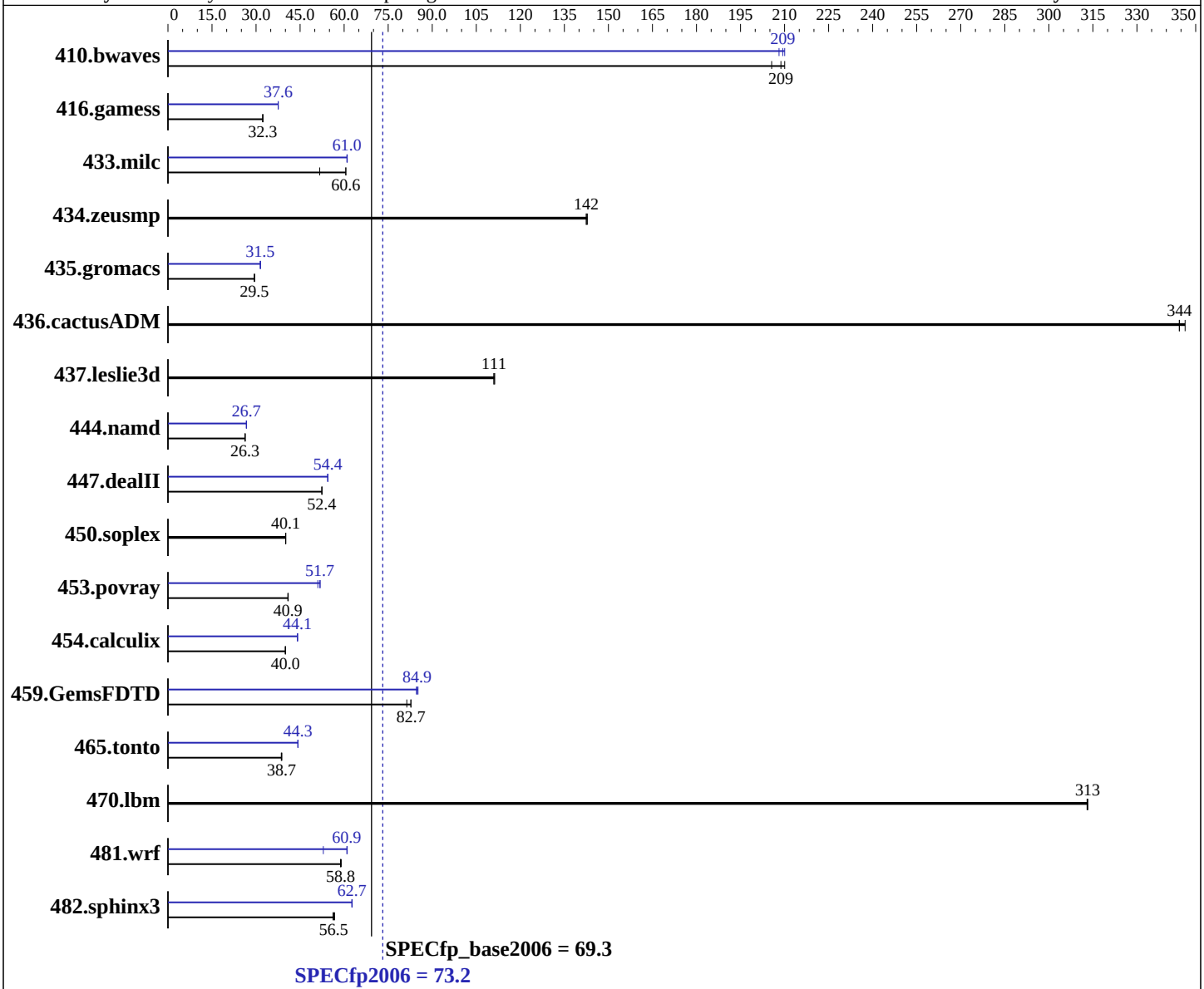
Cryo Performance Computing Ltd
Cryo Octane EDP-WS

SPECfp®2006 = 73.2

SPECfp_base2006 = 69.3

CPU2006 license: 3979
Test sponsor: Cryo Performance Computing Ltd
Tested by: Cryo Performance Computing Ltd

Test date: Mar-2011
Hardware Availability: Dec-2010
Software Availability: Dec-2010



Hardware

CPU Name:	Intel Xeon X5680
CPU Characteristics:	Intel Turbo Boost Technology disabled
CPU MHz:	4500
FPU:	Integrated
CPU(s) enabled:	12 cores, 2 chips, 6 cores/chip
CPU(s) orderable:	2 chips
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 2.6.32.12-0.7-default
Compiler:	Intel C++ and Fortran Professional Compiler for IA32 and Intel 64, Version 12 Build 12.0.2.137 Package ID: l_ccompxe_2011.2.137, l_fcompxe_2011.2.137
Auto Parallel:	Yes
File System:	ext3
System State:	Run level 3 (multi-user)

Continued on next page

SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Cryo Performance Computing Ltd
Cryo Octane EDP-WS

SPECfp2006 = 73.2

SPECfp_base2006 = 69.3

CPU2006 license: 3979
Test sponsor: Cryo Performance Computing Ltd
Tested by: Cryo Performance Computing Ltd

Test date: Mar-2011
Hardware Availability: Dec-2010
Software Availability: Dec-2010

L3 Cache: 12 MB I+D on chip per chip
Other Cache: None
Memory: 24 GB (6 x 4 GB 2Rx4 PC3-12800U-9, running at 1440 MHz and CL8)
Disk Subsystem: 1 x 120 GB Corsair Force Series SSD
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	66.1	206	64.7	210	**65.1**	**209**	65.3	208	64.7	210	**64.9**	**209**
416.gamess	607	32.3	606	32.3	**606**	**32.3**	522	37.5	**521**	**37.6**	521	37.6
433.milc	178	51.7	152	60.6	**152**	**60.6**	**151**	**61.0**	150	61.1	151	61.0
434.zeusmp	63.9	142	**63.9**	**142**	63.7	143	63.9	142	**63.9**	**142**	63.7	143
435.gromacs	**242**	**29.5**	242	29.5	243	29.4	226	31.5	227	31.4	**227**	**31.5**
436.cactusADM	34.7	344	34.5	346	**34.7**	**344**	34.7	344	34.5	346	**34.7**	**344**
437.leslie3d	84.7	111	84.5	111	**84.7**	**111**	84.7	111	84.5	111	**84.7**	**111**
444.namd	305	26.3	305	26.3	**305**	**26.3**	300	26.7	**300**	**26.7**	300	26.7
447.dealII	218	52.4	218	52.4	**218**	**52.4**	**210**	**54.4**	210	54.5	210	54.4
450.soplex	**208**	**40.1**	208	40.1	208	40.1	**208**	**40.1**	208	40.1	208	40.1
453.povray	**130**	**40.9**	130	40.8	130	41.0	104	51.0	**103**	**51.7**	103	51.8
454.calculix	**206**	**40.0**	206	40.0	206	40.0	187	44.1	**187**	**44.1**	187	44.1
459.GemsFDTD	128	82.7	**128**	**82.7**	130	81.3	125	84.6	**125**	**84.9**	125	85.2
465.tonto	254	38.7	**254**	**38.7**	255	38.6	**222**	**44.3**	222	44.3	223	44.2
470.lbm	43.9	313	**43.9**	**313**	43.9	313	43.9	313	**43.9**	**313**	43.9	313
481.wrf	**190**	**58.8**	189	59.0	190	58.8	211	52.9	**183**	**60.9**	183	61.1
482.sphinx3	**345**	**56.5**	343	56.8	347	56.2	**311**	**62.7**	311	62.6	311	62.8

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

General Notes

```
OMP_NUM_THREADS set to number of cores
Hyper-Threading Technology Disabled
KMP_AFFINITY set to granularity=fine,scatter
KMP_STACKSIZE set to 200M
```

Base Compiler Invocation

C benchmarks:

```
icc   -m64
```

C++ benchmarks:

```
icpc  -m64
```

Continued on next page

Base Compiler Invocation (Continued)

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

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

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

Peak Compiler Invocation

C benchmarks:
icc -m64

Continued on next page

Peak Compiler Invocation (Continued)

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) -static(pass 2) -prof-use(pass 2) -ansi-alias

470.lbm: basepeak = yes

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32 -unroll2

C++ benchmarks:

444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2) -fno-alias -auto-ilp32

447.dealII: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2) -unroll2 -ansi-alias -scalar-rep- -auto-ilp32

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) -static(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch -parallel

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) -static(pass 2) -prof-use(pass 2) -unroll2 -Ob0 -ansi-alias -scalar-rep-

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) -static(pass 2) -prof-use(pass 2) -unroll2 -Ob0 -opt-prefetch -parallel

465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2) -inline-calloc -opt-malloc-options=3 -auto -unroll4

Benchmarks using both Fortran and C:

435.gromacs: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2) -opt-prefetch -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32

481.wrf: Same as 454.calculix

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.html
http://www.spec.org/cpu2006/flags/Cryo-platform-linux64-revA.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml
http://www.spec.org/cpu2006/flags/Cryo-platform-linux64-revA.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 17:24:28 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 8 April 2011.