SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

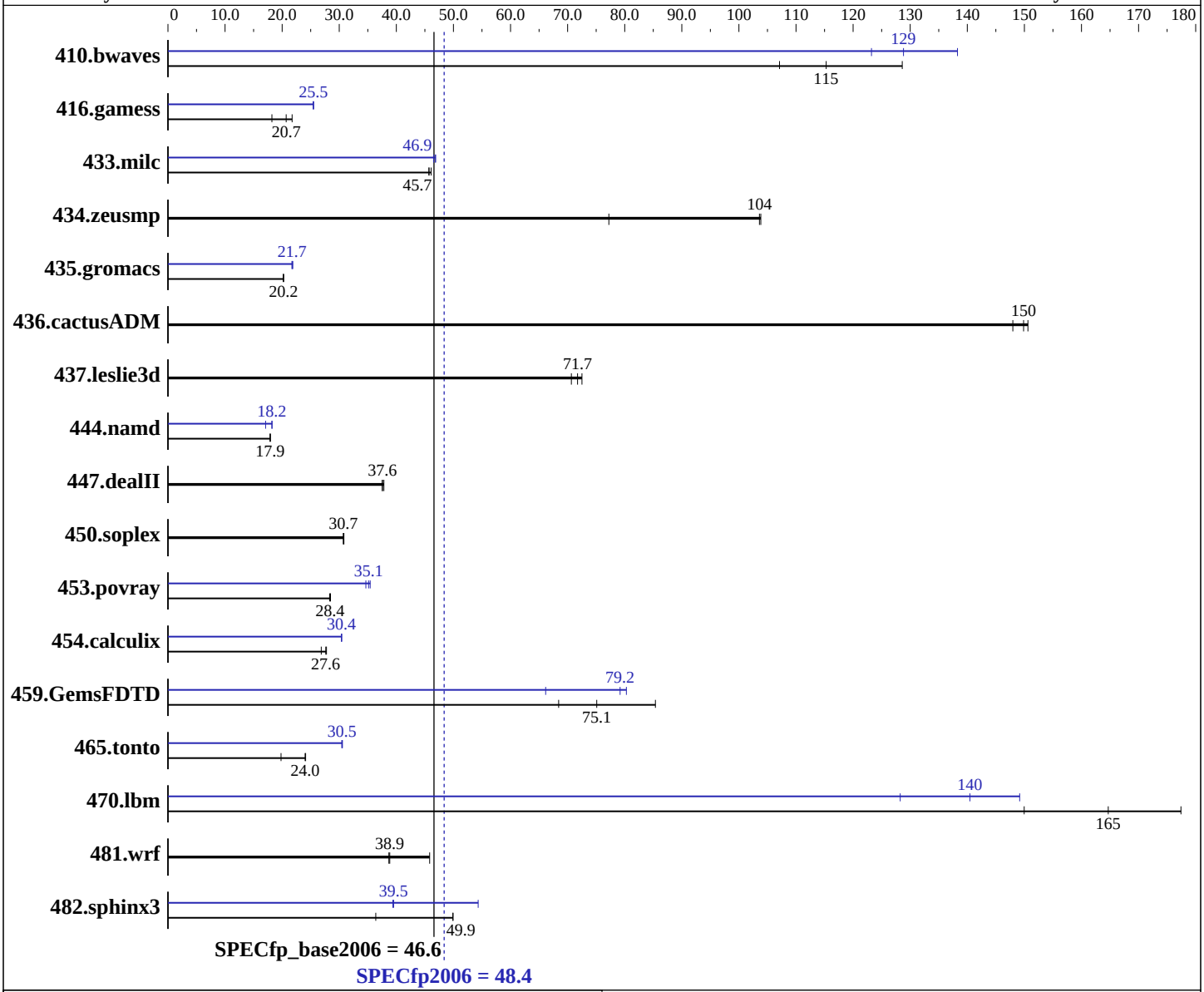
Huawei XH620, Intel Xeon X5660

SPECfp®2006 = 48.4

SPECfp_base2006 = 46.6

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei

Test date: Mar-2011
Hardware Availability: Apr-2010
Software Availability: Jan-2011



Hardware

CPU Name:	Intel Xeon X5660
CPU Characteristics:	Intel Turbo Boost Technology up to 3.20 GHz
CPU MHz:	2800
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

Continued on next page

Software

Operating System:	SUSE Linux Enterprise Server 11 (x86_64), Kernel 2.6.27.19-5-smp
Compiler:	Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64 Version 12.0.1.116 Build 20101116
Auto Parallel:	Yes
File System:	ext3
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

Huawei

Huawei XH620, Intel Xeon X5660

SPECfp2006 = 48.4

SPECfp_base2006 = 46.6

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei

Test date: Mar-2011
Hardware Availability: Apr-2010
Software Availability: Jan-2011

L3 Cache: 12 MB I+D on chip per chip
Other Cache: None
Memory: 48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem: 1 x 300 GB SAS, 15K 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	106	129	127	107	**118**	**115**	**105**	**129**	98.3	138	110	123
416.gamess	**946**	**20.7**	1075	18.2	900	21.7	**768**	**25.5**	770	25.4	768	25.5
433.milc	**201**	**45.7**	199	46.1	201	45.7	197	46.5	196	46.9	**196**	**46.9**
434.zeusmp	87.6	104	**87.8**	**104**	118	77.2	87.6	104	**87.8**	**104**	118	77.2
435.gromacs	**353**	**20.2**	354	20.2	353	20.3	329	21.7	326	21.9	**328**	**21.7**
436.cactusADM	79.3	151	**79.7**	**150**	80.8	148	79.3	151	**79.7**	**150**	80.8	148
437.leslie3d	130	72.5	**131**	**71.7**	133	70.7	130	72.5	**131**	**71.7**	133	70.7
444.namd	448	17.9	447	17.9	**448**	**17.9**	469	17.1	440	18.2	**441**	**18.2**
447.dealII	**305**	**37.6**	305	37.5	303	37.8	**305**	**37.6**	305	37.5	303	37.8
450.soplex	271	30.8	**271**	**30.7**	271	30.7	271	30.8	**271**	**30.7**	271	30.7
453.povray	187	28.5	188	28.3	**187**	**28.4**	150	35.4	**151**	**35.1**	153	34.7
454.calculix	297	27.8	**298**	**27.6**	307	26.8	271	30.4	**271**	**30.4**	271	30.4
459.GemsFDTD	**141**	**75.1**	124	85.4	155	68.4	**134**	**79.2**	132	80.3	160	66.2
465.tonto	408	24.1	**410**	**24.0**	497	19.8	**323**	**30.5**	322	30.6	323	30.5
470.lbm	77.4	177	91.6	150	**83.4**	**165**	92.1	149	**97.8**	**140**	107	128
481.wrf	244	45.8	**288**	**38.9**	289	38.7	244	45.8	**288**	**38.9**	289	38.7
482.sphinx3	390	49.9	**391**	**49.9**	535	36.4	359	54.3	495	39.4	**493**	**39.5**

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

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run.
Hugepages were not configured on the system.
```

Platform Notes

```
Data Reuse disabled in BIOS.
```

General Notes

```
Binaries compiled on RHEL 5.5
 OMP_NUM_THREADS set to number of cores
```

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

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 -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Continued on next page

Peak Optimization Flags (Continued)

Fortran benchmarks:

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

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 -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

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 -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

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) -prof-use(pass 2) -static -auto-ilp32 -ansi-alias

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/HUAWEI-platform-linux64-revA.html
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/HUAWEI-platform-linux64-revA.xml
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.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 21:16:24 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 15 April 2011.