SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

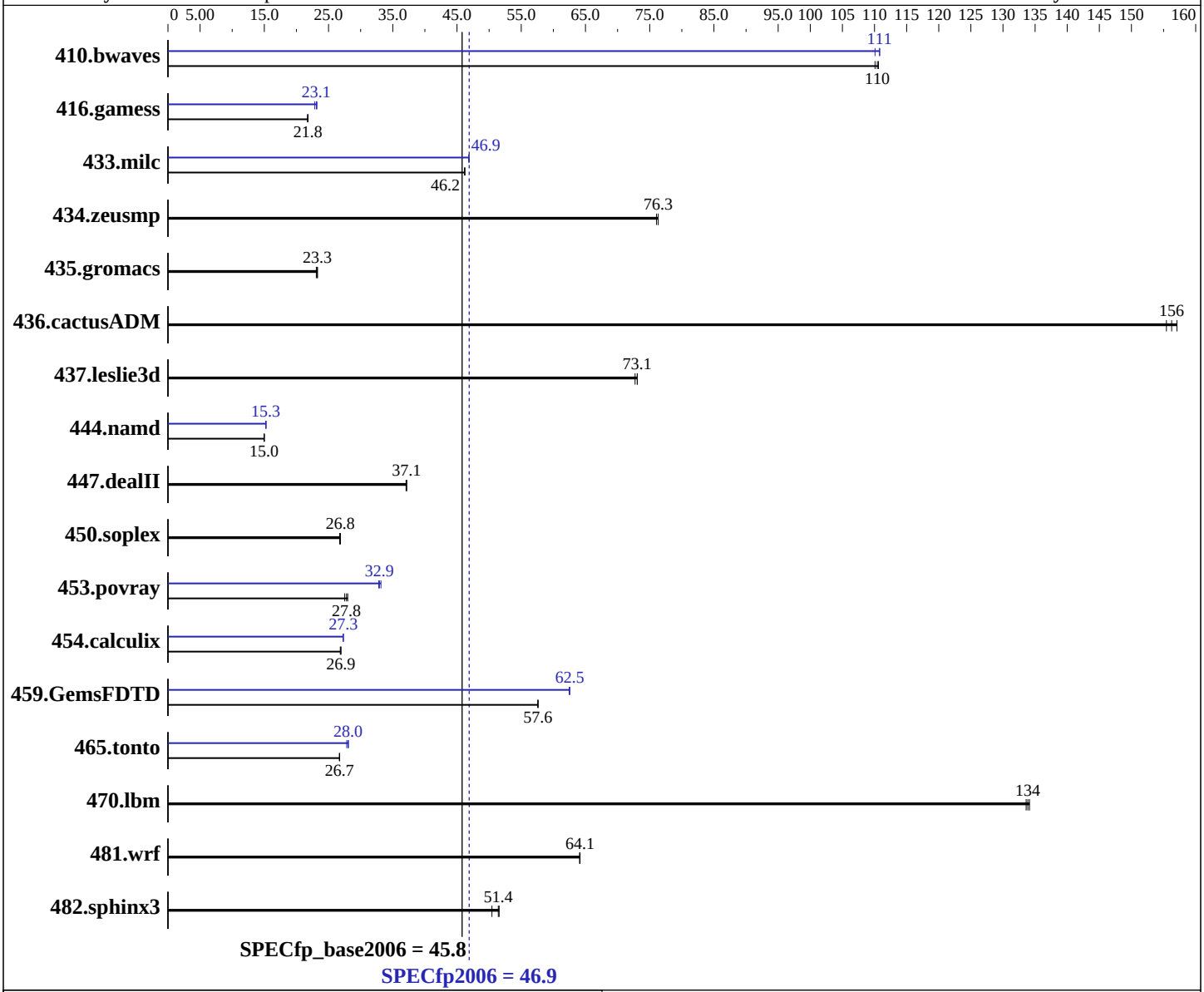
Express5800/E110d-M (Intel Xeon E5-2407)

SPECfp®2006 = 46.9

SPECfp_base2006 = 45.8

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Dec-2012
Hardware Availability: Dec-2012
Software Availability: Feb-2012



Hardware

CPU Name:	Intel Xeon E5-2407
CPU Characteristics:	
CPU MHz:	2200
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 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

Continued on next page

Software

Operating System:	Red Hat Enterprise Linux Server release 6.2 (Santiago) Kernel 2.6.32-220.el6.x86_64
Compiler:	C/C++: Version 12.1.3.293 of Intel C++ Studio XE for Linux; Fortran: Version 12.1.3.293 of Intel Fortran Studio XE for Linux
Auto Parallel:	Yes
File System:	ext4

Continued on next page

SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/E110d-M (Intel Xeon E5-2407)

SPECfp2006 = 46.9

SPECfp_base2006 = 45.8

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Dec-2012
Hardware Availability: Dec-2012
Software Availability: Feb-2012

L3 Cache: 10 MB I+D on chip per chip
Other Cache: None
Memory: 48 GB (6 x 8 GB 2Rx4 PC3L-12800R-11, ECC, running at 1066 MHz and CL7)
Disk Subsystem: 1 x 250 GB SATA, 7200 RPM
Other Hardware: None

System State: Run level 3 (multi-user)
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	123	110	123	111	**123**	**110**	123	111	123	110	**123**	**111**
416.gamess	898	21.8	902	21.7	**898**	**21.8**	857	22.9	844	23.2	**847**	**23.1**
433.milc	199	46.2	199	46.2	**199**	**46.2**	196	46.9	196	46.8	**196**	**46.9**
434.zeusmp	120	76.1	119	76.3	**119**	**76.3**	120	76.1	119	76.3	**119**	**76.3**
435.gromacs	309	23.1	**307**	**23.3**	307	23.3	309	23.1	**307**	**23.3**	307	23.3
436.cactusADM	**76.5**	**156**	76.1	157	76.9	155	**76.5**	**156**	76.1	157	76.9	155
437.leslie3d	129	73.1	129	72.7	**129**	**73.1**	129	73.1	129	72.7	**129**	**73.1**
444.namd	535	15.0	535	15.0	**535**	**15.0**	526	15.3	526	15.3	**526**	**15.3**
447.dealII	308	37.2	309	37.1	**308**	**37.1**	308	37.2	309	37.1	**308**	**37.1**
450.soplex	312	26.7	311	26.8	**311**	**26.8**	312	26.7	311	26.8	**311**	**26.8**
453.povray	190	28.0	193	27.5	**191**	**27.8**	160	33.2	**162**	**32.9**	162	32.8
454.calculix	**307**	**26.9**	308	26.8	306	26.9	302	27.3	303	27.3	**302**	**27.3**
459.GemsFDTD	184	57.6	184	57.6	**184**	**57.6**	170	62.5	170	62.5	**170**	**62.5**
465.tonto	**368**	**26.7**	368	26.7	368	26.7	354	27.8	350	28.1	**351**	**28.0**
470.lbm	103	134	**103**	**134**	102	134	103	134	**103**	**134**	102	134
481.wrf	174	64.2	174	64.1	**174**	**64.1**	174	64.2	174	64.1	**174**	**64.1**
482.sphinx3	378	51.6	386	50.4	**379**	**51.4**	378	51.6	386	50.4	**379**	**51.4**

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"
```

Platform Notes

```
BIOS Settings:
 Energy Performance: Performance
```

General Notes

```
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact,1,0"
LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64"
OMP_NUM_THREADS = "4"
```

Continued on next page

General Notes (Continued)

```
Added glibc-static-2.12-1.47.el6.x86_64.rpm
to enable static linking

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:
```
-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias
```

Continued on next page

Base Optimization Flags (Continued)

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: basepeak = yes

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

Continued on next page

Peak Optimization Flags (Continued)

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: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -parallel -static

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: -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: -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/Intel-ic12.1-official-linux64.20120425.html
http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-R120d-RevA.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120425.xml
http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-R120d-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 v1.2.
Report generated on Thu Jul 24 15:38:03 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 9 April 2013.