SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

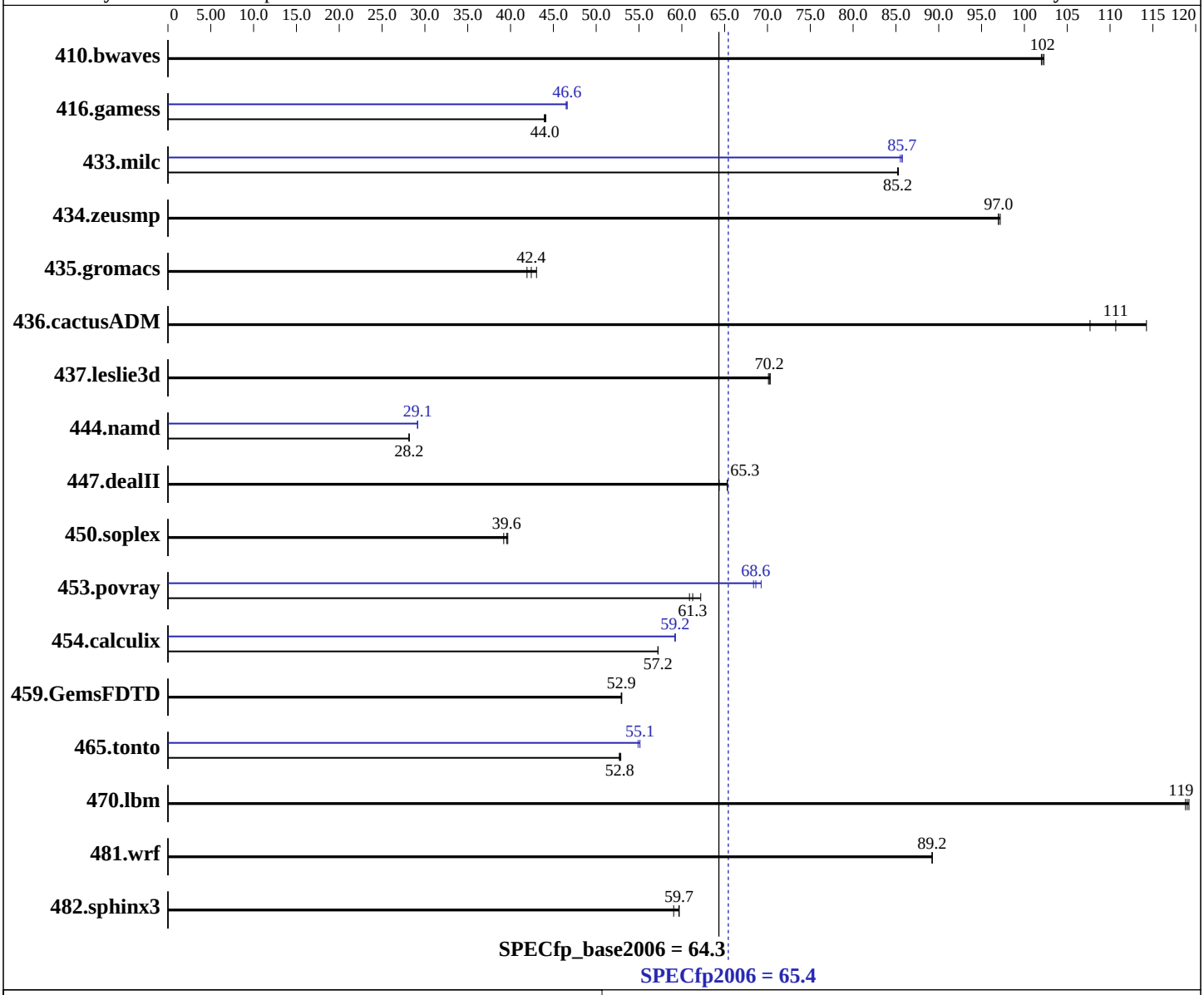
Express5800/T110g-S (Intel Core i3-4350)

SPECfp®2006 = 65.4

SPECfp_base2006 = 64.3

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

Test date: Jun-2014
Hardware Availability: Jul-2014
Software Availability: Jan-2014



Hardware

CPU Name:	Intel Core i3-4350
CPU Characteristics:	
CPU MHz:	3600
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip, 2 threads/core
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 6.5 (Santiago) Kernel 2.6.32-431.el6.x86_64
Compiler:	C/C++: Version 14.0.2.144 of Intel C++ Studio XE for Linux; Fortran: Version 14.0.2.144 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/T110g-S (Intel Core i3-4350)

SPECfp2006 = 65.4

SPECfp_base2006 = 64.3

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

Test date: Jun-2014
Hardware Availability: Jul-2014
Software Availability: Jan-2014

L3 Cache:	4 MB I+D on chip per chip	System State:	Run level 3 (multi-user)
Other Cache:	None	Base Pointers:	64-bit
Memory:	16 GB (2 x 8 GB 2Rx8 PC3-12800E-11, ECC)	Peak Pointers:	32/64-bit
Disk Subsystem:	1 x 250 GB SATA, 7200 RPM	Other Software:	None
Other Hardware:	None		

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	**133**	**102**	133	102	133	102	**133**	**102**	133	102	133	102
416.gamess	444	44.1	446	43.9	**445**	**44.0**	**420**	**46.6**	420	46.6	421	46.5
433.milc	108	85.3	108	85.2	**108**	**85.2**	107	85.7	**107**	**85.7**	107	85.5
434.zeusmp	93.6	97.2	**93.8**	**97.0**	93.8	97.0	93.6	97.2	**93.8**	**97.0**	93.8	97.0
435.gromacs	166	43.0	**168**	**42.4**	170	41.9	166	43.0	**168**	**42.4**	170	41.9
436.cactusADM	**108**	**111**	105	114	111	108	**108**	**111**	105	114	111	108
437.leslie3d	134	70.3	134	70.1	**134**	**70.2**	134	70.3	134	70.1	**134**	**70.2**
444.namd	285	28.2	285	28.1	**285**	**28.2**	275	29.2	**275**	**29.1**	275	29.1
447.dealII	178	64.4	175	65.3	**175**	**65.3**	178	64.4	175	65.3	**175**	**65.3**
450.soplex	**211**	**39.6**	210	39.7	213	39.2	**211**	**39.6**	210	39.7	213	39.2
453.povray	85.5	62.2	87.4	60.9	**86.8**	**61.3**	77.8	68.4	76.8	69.3	**77.5**	**68.6**
454.calculix	144	57.2	144	57.2	**144**	**57.2**	139	59.2	**139**	**59.2**	139	59.2
459.GemsFDTD	200	53.0	200	52.9	**200**	**52.9**	200	53.0	200	52.9	**200**	**52.9**
465.tonto	**186**	**52.8**	187	52.7	186	52.9	179	55.1	179	54.9	**179**	**55.1**
470.lbm	**115**	**119**	115	119	116	119	**115**	**119**	115	119	116	119
481.wrf	125	89.2	**125**	**89.2**	125	89.2	125	89.2	**125**	**89.2**	125	89.2
482.sphinx3	326	59.7	**327**	**59.7**	330	59.0	326	59.7	**327**	**59.7**	330	59.0

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
 Processor C6 Report: Disabled
 Package C State Limit: C0
```

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:/home/cpu2006/sh"
OMP_NUM_THREADS = "2"

 Added glibc-static-2.12-1.132.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:
`-xCORE-AVX2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch -ansi-alias`

C++ benchmarks:
`-xCORE-AVX2 -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias`

Fortran benchmarks:
`-xCORE-AVX2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch`

Benchmarks using both Fortran and C:
`-xCORE-AVX2 -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: `-xCORE-AVX2`(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`

Continued on next page

Peak Optimization Flags (Continued)

C++ benchmarks:

444.namd: -xCORE-AVX2(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: -xCORE-AVX2(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

416.gamess: -xCORE-AVX2(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: basepeak = yes

465.tonto: -xCORE-AVX2(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: -xCORE-AVX2 -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-ic14.0-official-linux64.20140128.html
http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-R120-RevB.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml
http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-R120-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 v1.2.
Report generated on Tue Aug 26 18:10:20 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 26 August 2014.