



SPEC[®] CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp[®]2006 = **97.9**

Express5800/B120f (Intel Xeon E5-2698 v3)

SPECfp_base2006 = **92.0**

CPU2006 license: 9006

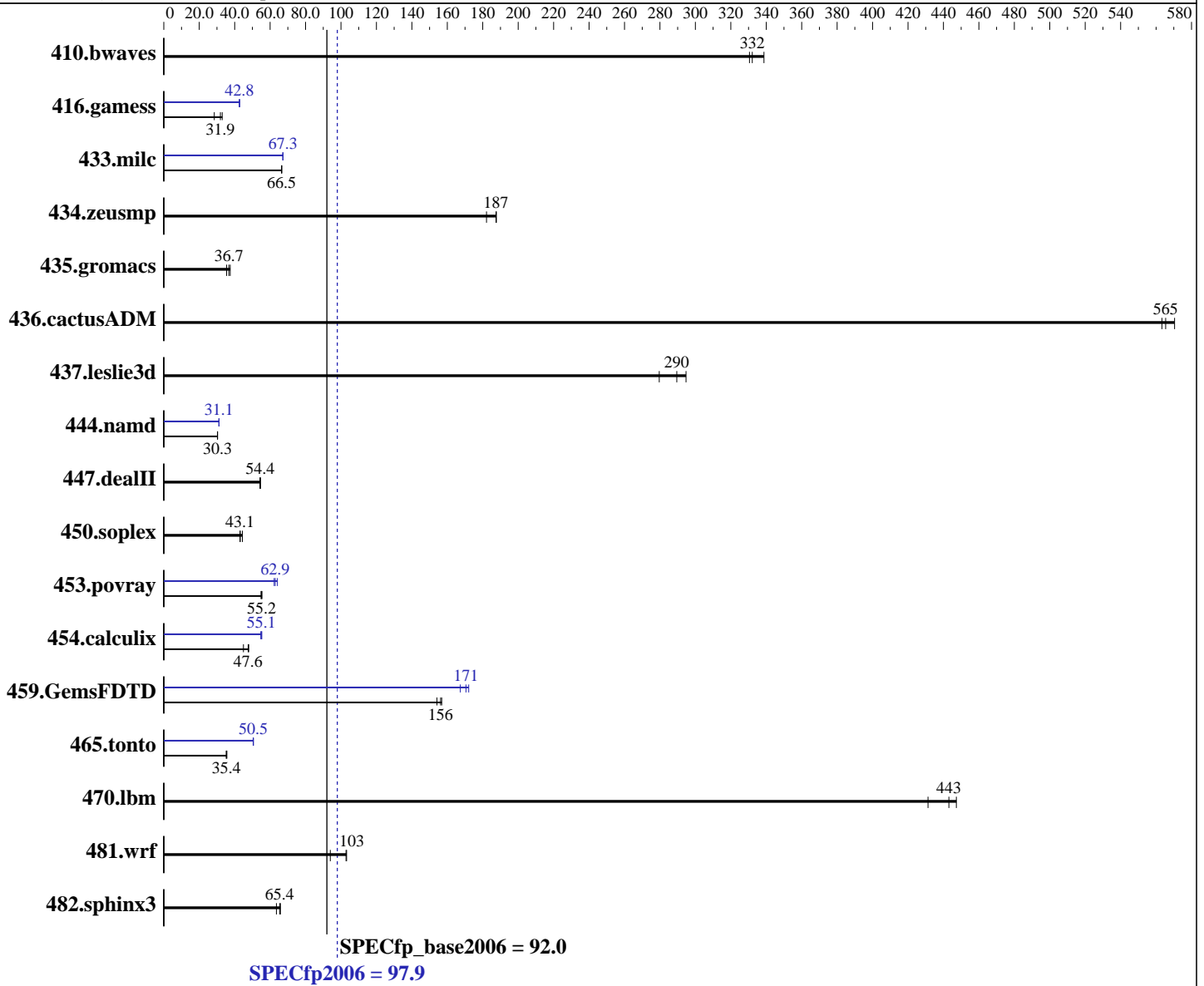
Test date: Oct-2014

Test sponsor: NEC Corporation

Hardware Availability: Apr-2015

Tested by: NEC Corporation

Software Availability: Jul-2014



Hardware

CPU Name: Intel Xeon E5-2698 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
 CPU MHz: 2300
 FPU: Integrated
 CPU(s) enabled: 32 cores, 2 chips, 16 cores/chip
 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: Red Hat Enterprise Linux Server release 6.5 (Santiago)
 Kernel 2.6.32-431.20.3.el6.x86_64
 Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux;
 Fortran: Version 15.0.0.090 of Intel Fortran Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp2006 = **97.9**

Express5800/B120f (Intel Xeon E5-2698 v3)

SPECfp_base2006 = **92.0**

CPU2006 license: 9006

Test date: Oct-2014

Test sponsor: NEC Corporation

Hardware Availability: Apr-2015

Tested by: NEC Corporation

Software Availability: Jul-2014

L3 Cache: 40 MB I+D on chip per chip
 Other Cache: None
 Memory: 96 GB (6 x 16 GB 2Rx4 PC4-2133P-R)
 Disk Subsystem: 1 x 300 GB SAS, 10000 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	40.9	332	40.1	339	41.1	331	40.9	332	40.1	339	41.1	331
416.gamess	687	28.5	613	31.9	594	33.0	459	42.6	458	42.8	458	42.8
433.milc	138	66.5	138	66.5	138	66.6	137	67.1	136	67.3	136	67.3
434.zeusmp	48.5	188	48.5	187	50.0	182	48.5	188	48.5	187	50.0	182
435.gromacs	202	35.4	195	36.7	191	37.5	202	35.4	195	36.7	191	37.5
436.cactusADM	20.9	570	21.1	565	21.2	563	20.9	570	21.1	565	21.2	563
437.leslie3d	31.9	295	32.5	290	33.6	280	31.9	295	32.5	290	33.6	280
444.namd	265	30.3	265	30.3	265	30.3	257	31.1	258	31.1	258	31.1
447.dealII	211	54.3	210	54.4	210	54.5	211	54.3	210	54.4	210	54.5
450.soplex	194	43.1	188	44.4	194	43.1	194	43.1	188	44.4	194	43.1
453.povray	97.0	54.9	96.4	55.2	96.0	55.4	83.0	64.1	85.4	62.3	84.6	62.9
454.calculix	184	44.9	172	47.9	173	47.6	149	55.3	150	55.1	151	54.7
459.GemsFDTD	67.7	157	68.8	154	67.9	156	62.2	171	61.7	172	63.4	167
465.tonto	278	35.4	276	35.6	279	35.2	195	50.4	195	50.6	195	50.5
470.lbm	31.9	431	31.0	443	30.7	447	31.9	431	31.0	443	30.7	447
481.wrf	109	103	119	94.0	108	103	109	103	119	94.0	108	103
482.sphinx3	296	65.8	307	63.6	298	65.4	296	65.8	307	63.6	298	65.4

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:
 Processor C6 Report: Enabled
 Energy Performance: Performance
 Patrol Scrub: Disabled
 Early Snoop: Disabled
 Hyper-Threading: Disabled



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp2006 = 97.9

Express5800/B120f (Intel Xeon E5-2698 v3)

SPECfp_base2006 = 92.0

CPU2006 license: 9006

Test date: Oct-2014

Test sponsor: NEC Corporation

Hardware Availability: Apr-2015

Tested by: NEC Corporation

Software Availability: Jul-2014

General Notes

Environment variables set by runspec before the start of the run:

KMP_AFFINITY = "granularity=fine,compact"

LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh"

OMP_NUM_THREADS = "32"

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 -parallel -opt-prefetch
-ansi-alias

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

NEC Corporation	SPECfp2006 =	97.9
Express5800/B120f (Intel Xeon E5-2698 v3)	SPECfp_base2006 =	92.0

CPU2006 license: 9006	Test date: Oct-2014
Test sponsor: NEC Corporation	Hardware Availability: Apr-2015
Tested by: NEC Corporation	Software Availability: Jul-2014

Base Optimization Flags (Continued)

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

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

Benchmarks using both Fortran and C:
 -xCORE-AVX2 -ipo -O3 -no-prec-div -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)
 -auto-ilp32 -ansi-alias

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp2006 = 97.9

Express5800/B120f (Intel Xeon E5-2698 v3)

SPECfp_base2006 = 92.0

CPU2006 license: 9006

Test date: Oct-2014

Test sponsor: NEC Corporation

Hardware Availability: Apr-2015

Tested by: NEC Corporation

Software Availability: Jul-2014

Peak Optimization Flags (Continued)

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-

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -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 -opt-prefetch -parallel

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-ic15.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-B120f-RevB.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-B120f-RevB.xml>



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp2006 = 97.9

Express5800/B120f (Intel Xeon E5-2698 v3)

SPECfp_base2006 = 92.0

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Oct-2014

Hardware Availability: Apr-2015

Software Availability: Jul-2014

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 Jun 2 13:46:34 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 2 June 2015.