



SPEC® CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp®2006 = 99.0

Express5800/T110h-S (Intel Xeon E3-1230 v5)

SPECfp_base2006 = 96.9

CPU2006 license: 9006

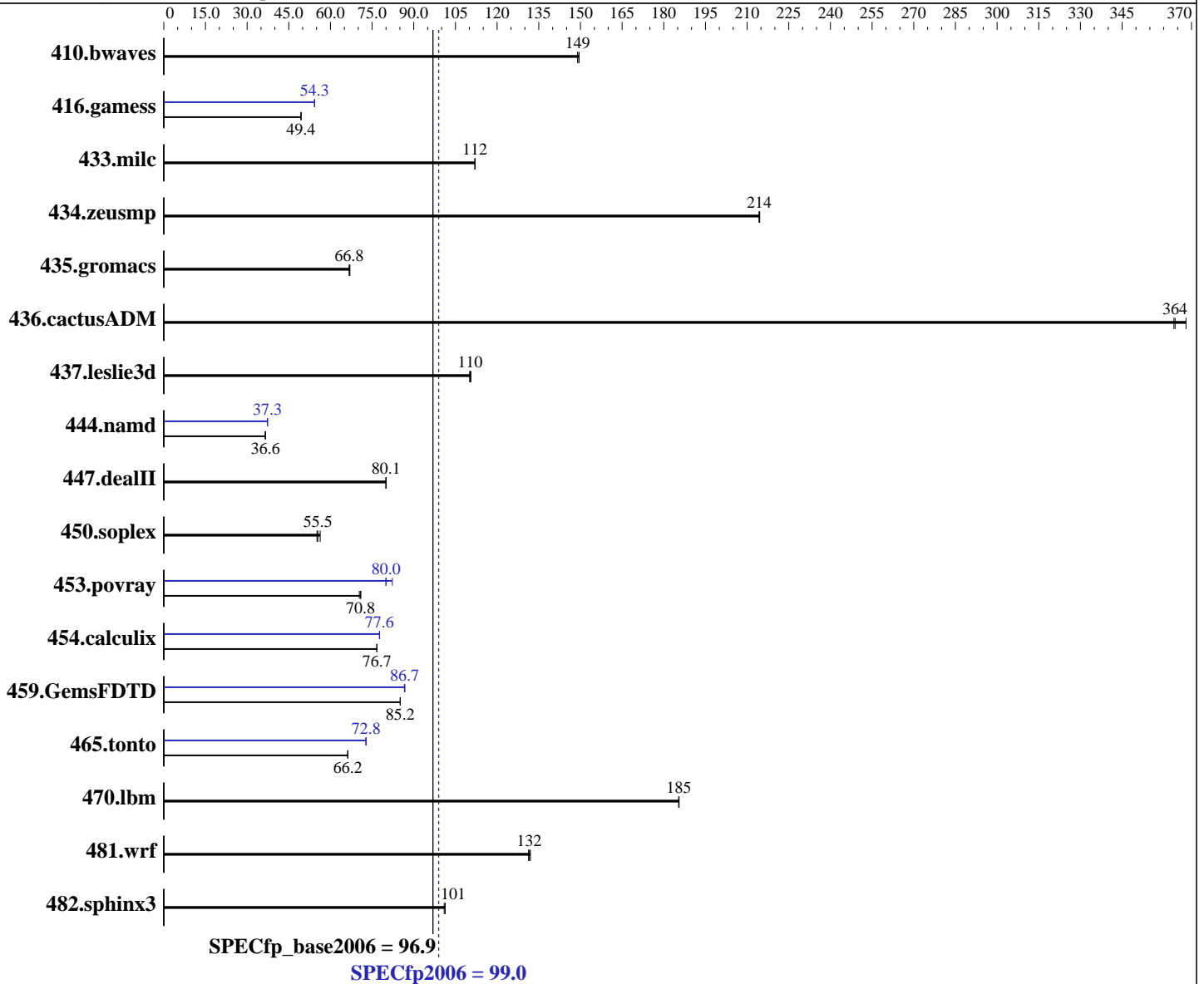
Test date: Dec-2015

Test sponsor: NEC Corporation

Hardware Availability: Mar-2016

Tested by: NEC Corporation

Software Availability: Nov-2015



Hardware

CPU Name: Intel Xeon E3-1230 v5
 CPU Characteristics: Intel Turbo Boost Technology up to 3.80 GHz
 CPU MHz: 3400
 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 7.2 (Maipo)
 Kernel 3.10.0-327.el7.x86_64
 Compiler: C/C++: Version 16.0.0.101 of Intel C++ Studio XE for Linux;
 Fortran: Version 16.0.0.101 of Intel Fortran Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp2006 = **99.0**

Express5800/T110h-S (Intel Xeon E3-1230 v5)

SPECfp_base2006 = **96.9**

CPU2006 license: 9006

Test date: Dec-2015

Test sponsor: NEC Corporation

Hardware Availability: Mar-2016

Tested by: NEC Corporation

Software Availability: Nov-2015

L3 Cache: 8 MB I+D on chip per chip
 Other Cache: None
 Memory: 16 GB (2 x 8 GB 2Rx8 PC4-2133P-E)
 Disk Subsystem: 1 x 500 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	<u>91.2</u>	<u>149</u>	91.2	149	90.9	150	<u>91.2</u>	<u>149</u>	91.2	149	90.9	150
416.gamess	396	49.4	<u>396</u>	<u>49.4</u>	397	49.4	361	54.3	<u>361</u>	<u>54.3</u>	360	54.3
433.milc	81.9	112	<u>81.9</u>	<u>112</u>	82.0	112	81.9	112	<u>81.9</u>	<u>112</u>	82.0	112
434.zeusmp	42.5	214	42.4	215	<u>42.4</u>	<u>214</u>	42.5	214	42.4	215	<u>42.4</u>	<u>214</u>
435.gromacs	107	67.0	107	66.8	<u>107</u>	<u>66.8</u>	107	67.0	107	66.8	<u>107</u>	<u>66.8</u>
436.cactusADM	32.9	364	32.5	368	<u>32.8</u>	<u>364</u>	32.9	364	32.5	368	<u>32.8</u>	<u>364</u>
437.leslie3d	85.0	111	<u>85.2</u>	<u>110</u>	85.4	110	85.0	111	<u>85.2</u>	<u>110</u>	85.4	110
444.namd	219	36.7	220	36.4	<u>219</u>	<u>36.6</u>	<u>215</u>	<u>37.3</u>	215	37.4	215	37.3
447.dealII	143	79.9	<u>143</u>	<u>80.1</u>	143	80.1	143	79.9	<u>143</u>	<u>80.1</u>	143	80.1
450.soplex	151	55.1	148	56.3	<u>150</u>	<u>55.5</u>	151	55.1	148	56.3	<u>150</u>	<u>55.5</u>
453.povray	<u>75.1</u>	<u>70.8</u>	75.0	70.9	75.6	70.4	66.5	79.9	64.7	82.3	<u>66.5</u>	<u>80.0</u>
454.calculix	108	76.7	<u>108</u>	<u>76.7</u>	108	76.7	106	77.7	<u>106</u>	<u>77.6</u>	106	77.6
459.GemsFDTD	125	85.2	125	85.1	<u>125</u>	<u>85.2</u>	122	86.8	122	86.6	<u>122</u>	<u>86.7</u>
465.tonto	148	66.3	<u>149</u>	<u>66.2</u>	149	66.2	135	72.8	135	72.8	<u>135</u>	<u>72.8</u>
470.lbm	74.1	185	<u>74.1</u>	<u>185</u>	74.1	186	74.1	185	<u>74.1</u>	<u>185</u>	74.1	186
481.wrf	85.1	131	84.6	132	<u>84.9</u>	<u>132</u>	85.1	131	84.6	132	<u>84.9</u>	<u>132</u>
482.sphinx3	192	101	<u>192</u>	<u>101</u>	193	101	192	101	<u>192</u>	<u>101</u>	193	101

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:
 Power Management Policy: Custom
 Energy Performance: Performance
 Hyper-Threading: Disabled



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp2006 = 99.0

Express5800/T110h-S (Intel Xeon E3-1230 v5)

SPECfp_base2006 = 96.9

CPU2006 license: 9006

Test date: Dec-2015

Test sponsor: NEC Corporation

Hardware Availability: Mar-2016

Tested by: NEC Corporation

Software Availability: Nov-2015

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 = "4"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7.1

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/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



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp2006 = 99.0

Express5800/T110h-S (Intel Xeon E3-1230 v5)

SPECfp_base2006 = 96.9

CPU2006 license: 9006

Test date: Dec-2015

Test sponsor: NEC Corporation

Hardware Availability: Mar-2016

Tested by: NEC Corporation

Software Availability: Nov-2015

Base Optimization Flags

C benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch
-ansi-alias

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: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp2006 = 99.0

Express5800/T110h-S (Intel Xeon E3-1230 v5)

SPECfp_base2006 = 96.9

CPU2006 license: 9006

Test date: Dec-2015

Test sponsor: NEC Corporation

Hardware Availability: Mar-2016

Tested by: NEC Corporation

Software Availability: Nov-2015

Peak Optimization Flags (Continued)

444.namd: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -fno-alias
-auto-ilp32

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll4
-ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -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:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll2
-inline-level=0 -opt-prefetch -parallel

465.tonto: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -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



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp2006 = 99.0

Express5800/T110h-S (Intel Xeon E3-1230 v5)

SPECfp_base2006 = 96.9

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Dec-2015

Hardware Availability: Mar-2016

Software Availability: Nov-2015

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-110h-RevA.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-110h-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 Tue Feb 9 17:22:02 2016 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 9 February 2016.