



SPEC[®] CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp[®]2006 = 87.1

Express5800/R110h-1 (Intel Xeon E3-1240L v5)

SPECfp_base2006 = 84.9

CPU2006 license: 9006

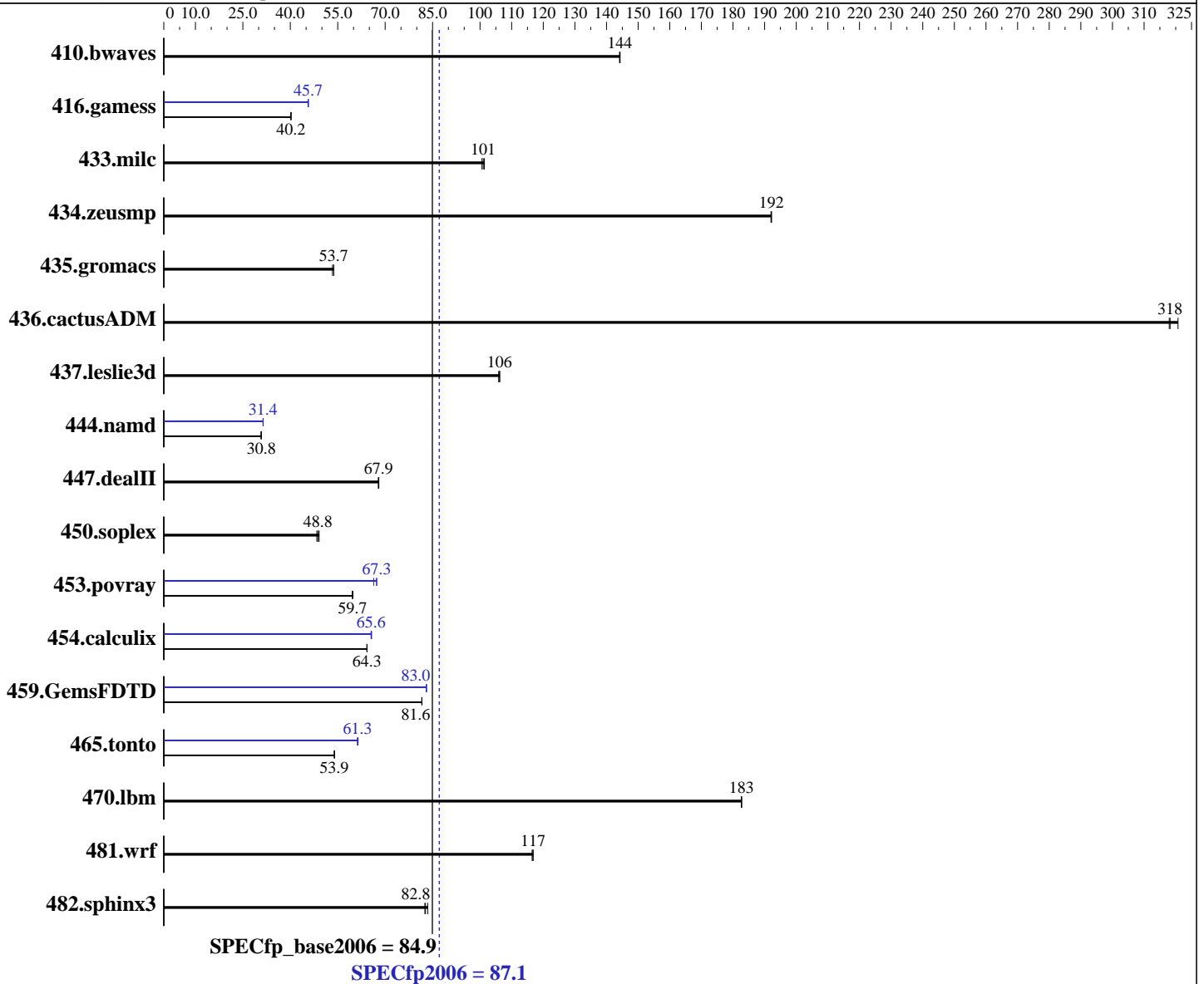
Test date: Dec-2015

Test sponsor: NEC Corporation

Hardware Availability: Mar-2016

Tested by: NEC Corporation

Software Availability: Nov-2015



Hardware

CPU Name: Intel Xeon E3-1240L v5
 CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz
 CPU MHz: 2100
 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 = **87.1**

Express5800/R110h-1 (Intel Xeon E3-1240L v5)

SPECfp_base2006 = **84.9**

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>94.2</u>	<u>144</u>	94.3	144	94.2	144	<u>94.2</u>	<u>144</u>	94.3	144	94.2	144
416.gamess	487	40.2	487	40.2	<u>487</u>	<u>40.2</u>	429	45.7	<u>429</u>	<u>45.7</u>	428	45.7
433.milc	<u>90.9</u>	<u>101</u>	91.2	101	90.5	101	<u>90.9</u>	<u>101</u>	91.2	101	90.5	101
434.zeusmp	47.4	192	<u>47.4</u>	<u>192</u>	47.4	192	47.4	192	<u>47.4</u>	<u>192</u>	47.4	192
435.gromacs	<u>133</u>	<u>53.7</u>	134	53.3	133	53.8	<u>133</u>	<u>53.7</u>	134	53.3	133	53.8
436.cactusADM	37.3	321	<u>37.6</u>	<u>318</u>	37.6	318	37.3	321	<u>37.6</u>	<u>318</u>	37.6	318
437.leslie3d	88.5	106	88.8	106	<u>88.5</u>	<u>106</u>	88.5	106	88.8	106	<u>88.5</u>	<u>106</u>
444.namd	260	30.8	261	30.8	<u>260</u>	<u>30.8</u>	255	31.4	255	31.4	<u>255</u>	<u>31.4</u>
447.dealII	<u>169</u>	<u>67.9</u>	168	68.0	169	67.9	<u>169</u>	<u>67.9</u>	168	68.0	169	67.9
450.soplex	172	48.4	170	49.1	<u>171</u>	<u>48.8</u>	172	48.4	170	49.1	<u>171</u>	<u>48.8</u>
453.povray	<u>89.1</u>	<u>59.7</u>	89.3	59.6	89.0	59.8	<u>79.1</u>	<u>67.3</u>	80.1	66.4	79.0	67.3
454.calculix	128	64.3	<u>128</u>	<u>64.3</u>	128	64.3	126	65.7	126	65.5	<u>126</u>	<u>65.6</u>
459.GemsFDTD	130	81.6	<u>130</u>	<u>81.6</u>	130	81.6	128	83.0	128	83.1	<u>128</u>	<u>83.0</u>
465.tonto	182	54.0	<u>182</u>	<u>53.9</u>	182	53.9	160	61.4	161	61.3	<u>161</u>	<u>61.3</u>
470.lbm	75.2	183	<u>75.2</u>	<u>183</u>	75.2	183	75.2	183	<u>75.2</u>	<u>183</u>	75.2	183
481.wrf	95.6	117	95.9	116	<u>95.7</u>	<u>117</u>	95.6	117	95.9	116	<u>95.7</u>	<u>117</u>
482.sphinx3	236	82.6	233	83.5	<u>235</u>	<u>82.8</u>	236	82.6	233	83.5	<u>235</u>	<u>82.8</u>

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 = 87.1

Express5800/R110h-1 (Intel Xeon E3-1240L v5)

SPECfp_base2006 = 84.9

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 = 87.1

Express5800/R110h-1 (Intel Xeon E3-1240L v5)

SPECfp_base2006 = 84.9

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

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/

Page 4



SPEC CFP2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp2006 = 87.1

Express5800/R110h-1 (Intel Xeon E3-1240L v5)

SPECfp_base2006 = 84.9

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 = 87.1

Express5800/R110h-1 (Intel Xeon E3-1240L v5)

SPECfp_base2006 = 84.9

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 17:21:13 2016 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 9 February 2016.