



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

## NEC Corporation

### SPECfp<sup>®</sup>\_rate2006 = 173

### Express5800/T110i-S (Intel Xeon E3-1240L v5)

### SPECfp\_rate\_base2006 = 167

CPU2006 license: 9006

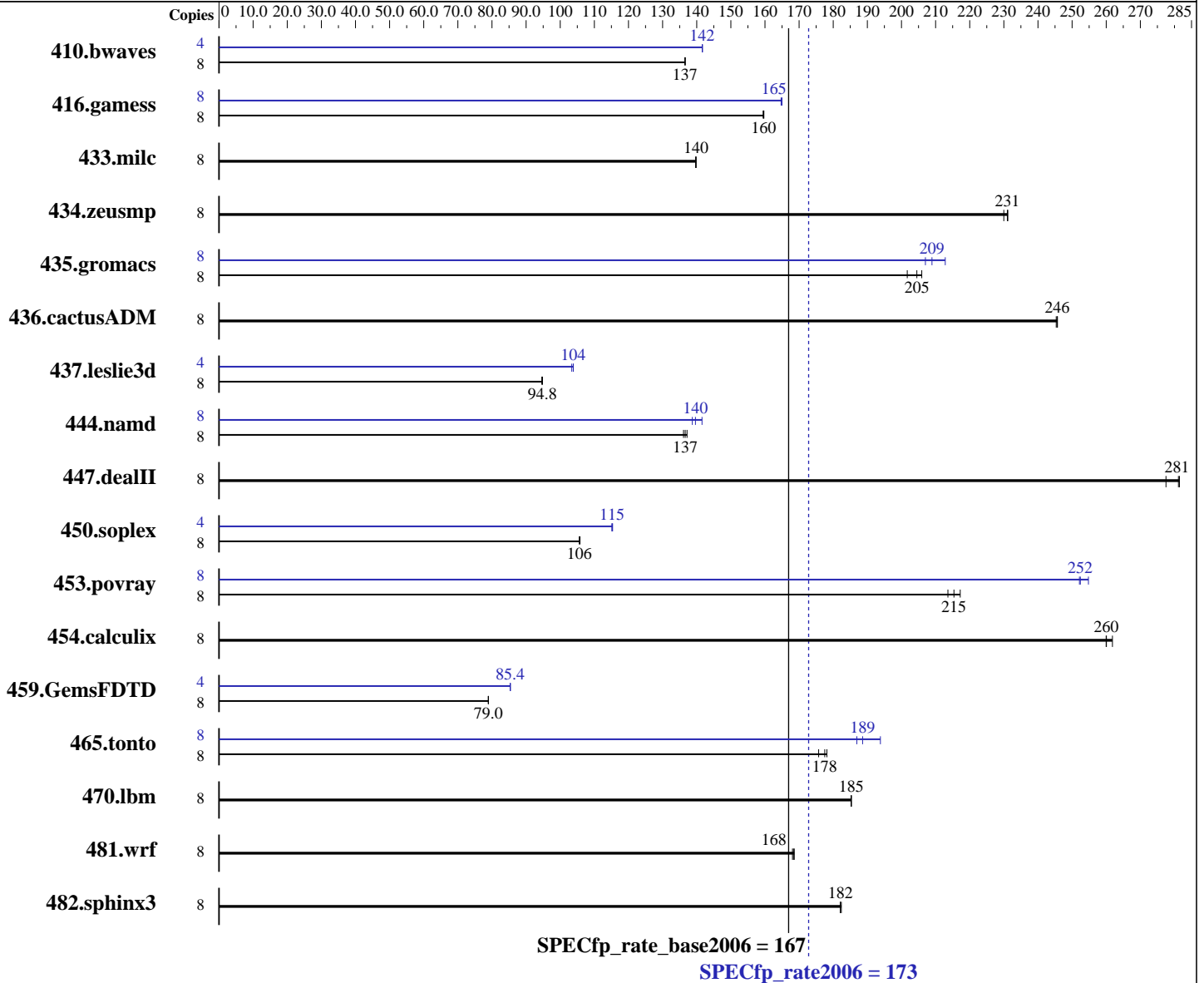
Test date: Apr-2017

Test sponsor: NEC Corporation

Hardware Availability: Apr-2017

Tested by: NEC Corporation

Software Availability: Jan-2017



#### 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, 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 7.3 (Maipo)  
 Kernel 3.10.0-514.6.1.el7.x86\_64  
 Compiler: C/C++: Version 17.0.0.098 of Intel C/C++ Compiler for Linux;  
 Fortran: Version 17.0.0.098 of Intel Fortran Compiler for Linux  
 Auto Parallel: No  
 File System: ext4

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

## NEC Corporation

SPECfp\_rate2006 = 173

Express5800/T110i-S (Intel Xeon E3-1240L v5)

SPECfp\_rate\_base2006 = 167

CPU2006 license: 9006

Test date: Apr-2017

Test sponsor: NEC Corporation

Hardware Availability: Apr-2017

Tested by: NEC Corporation

Software Availability: Jan-2017

L3 Cache: 8 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 32 GB (2 x 16 GB 2Rx8 PC4-2400T-E, running at 2133 MHz)  
 Disk Subsystem: 1 x 1 TB SATA, 7200 RPM  
 Other Hardware: None

System State: Run level 3 (multi-user)  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: None

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	796	137	<b>796</b>	<b>137</b>	796	137	4	384	142	384	142	<b>384</b>	<b>142</b>
416.gamess	8	981	160	982	159	<b>981</b>	<b>160</b>	8	<b>950</b>	<b>165</b>	951	165	949	165
433.milc	8	526	140	<b>525</b>	<b>140</b>	525	140	8	526	140	<b>525</b>	<b>140</b>	525	140
434.zeusmp	8	317	230	315	231	<b>315</b>	<b>231</b>	8	317	230	315	231	<b>315</b>	<b>231</b>
435.gromacs	8	<b>279</b>	<b>205</b>	283	202	277	206	8	<b>273</b>	<b>209</b>	268	213	276	207
436.cactusADM	8	389	246	<b>389</b>	<b>246</b>	390	245	8	389	246	<b>389</b>	<b>246</b>	390	245
437.leslie3d	8	<b>793</b>	<b>94.8</b>	793	94.8	795	94.6	4	<b>362</b>	<b>104</b>	362	104	364	103
444.namd	8	471	136	468	137	<b>470</b>	<b>137</b>	8	<b>460</b>	<b>140</b>	463	139	453	142
447.dealII	8	325	281	330	278	<b>326</b>	<b>281</b>	8	325	281	330	278	<b>326</b>	<b>281</b>
450.soplex	8	631	106	632	106	<b>631</b>	<b>106</b>	4	290	115	<b>289</b>	<b>115</b>	289	115
453.povray	8	199	214	<b>198</b>	<b>215</b>	196	217	8	<b>169</b>	<b>252</b>	169	252	167	255
454.calculix	8	254	260	<b>254</b>	<b>260</b>	252	262	8	254	260	<b>254</b>	<b>260</b>	252	262
459.GemsFDTD	8	<b>1075</b>	<b>79.0</b>	1075	79.0	1076	78.9	4	<b>497</b>	<b>85.4</b>	497	85.4	497	85.3
465.tonto	8	448	176	<b>443</b>	<b>178</b>	442	178	8	406	194	421	187	<b>417</b>	<b>189</b>
470.lbm	8	593	185	<b>593</b>	<b>185</b>	593	185	8	593	185	<b>593</b>	<b>185</b>	593	185
481.wrf	8	530	169	<b>531</b>	<b>168</b>	532	168	8	530	169	<b>531</b>	<b>168</b>	532	168
482.sphinx3	8	855	182	<b>856</b>	<b>182</b>	856	182	8	855	182	<b>856</b>	<b>182</b>	856	182

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## Submit Notes

The taskset mechanism was used to bind copies to processors. The config file option 'submit' was used to generate taskset commands to bind each copy to a specific processor. For details, please see the config file.

## Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"



# SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

**NEC Corporation**

**SPECfp\_rate2006 = 173**

**Express5800/T110i-S (Intel Xeon E3-1240L v5)**

**SPECfp\_rate\_base2006 = 167**

**CPU2006 license:** 9006

**Test date:** Apr-2017

**Test sponsor:** NEC Corporation

**Hardware Availability:** Apr-2017

**Tested by:** NEC Corporation

**Software Availability:** Jan-2017

## Platform Notes

BIOS Settings:

Power Management Policy: Custom  
Energy Performance: Performance  
DCU Streamer Prefetcher: Disabled

## General Notes

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

LD\_LIBRARY\_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh10.2"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM  
memory using Redhat Enterprise Linux 7.2  
Transparent Huge Pages enabled by default

## 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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp\_rate2006 = 173

Express5800/T110i-S (Intel Xeon E3-1240L v5)

SPECfp\_rate\_base2006 = 167

CPU2006 license: 9006

Test date: Apr-2017

Test sponsor: NEC Corporation

Hardware Availability: Apr-2017

Tested by: NEC Corporation

Software Availability: Jan-2017

## Base Portability Flags (Continued)

482.sphinx3: -DSPEC\_CPU\_LP64

## Base Optimization Flags

C benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32  
-qopt-mem-layout-trans=3

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32  
-qopt-mem-layout-trans=3

Fortran benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch

Benchmarks using both Fortran and C:

-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32  
-qopt-mem-layout-trans=3

## Peak Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks (except as noted below):

icpc -m64

450.soplex: icpc -m32 -L/opt/intel/compilers\_and\_libraries\_2017/linux/lib/ia32

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

## Peak 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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp\_rate2006 = 173

Express5800/T110i-S (Intel Xeon E3-1240L v5)

SPECfp\_rate\_base2006 = 167

CPU2006 license: 9006

Test date: Apr-2017

Test sponsor: NEC Corporation

Hardware Availability: Apr-2017

Tested by: NEC Corporation

Software Availability: Jan-2017

## Peak Portability Flags (Continued)

437.leslie3d: -DSPEC\_CPU\_LP64  
 444.namd: -DSPEC\_CPU\_LP64  
 447.deallI: -DSPEC\_CPU\_LP64  
 450.soplex: -D\_FILE\_OFFSET\_BITS=64  
 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

## Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)  
 -par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
 -no-prec-div(pass 2) -fno-alias -auto-ilp32  
 -qopt-mem-layout-trans=3

447.deallI: basepeak = yes

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)  
 -par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
 -no-prec-div(pass 2) -qopt-malloc-options=3  
 -qopt-mem-layout-trans=3

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)  
 -par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
 -no-prec-div(pass 2) -unroll4 -qopt-mem-layout-trans=3

Fortran benchmarks:

410.bwaves: -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch

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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2017 Standard Performance Evaluation Corporation

NEC Corporation

SPECfp\_rate2006 = 173

Express5800/T110i-S (Intel Xeon E3-1240L v5)

SPECfp\_rate\_base2006 = 167

CPU2006 license: 9006

Test date: Apr-2017

Test sponsor: NEC Corporation

Hardware Availability: Apr-2017

Tested by: NEC Corporation

Software Availability: Jan-2017

## Peak Optimization Flags (Continued)

434.zeusmp: basepeak = yes

437.leslie3d: Same as 410.bwaves

459.GemsFDTD: Same as 410.bwaves

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)  
-par-num-threads=1(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -unroll4 -auto -inline-calloc  
-qopt-malloc-options=3

Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -xCORE-AVX2(pass 2)  
-par-num-threads=1(pass 1) -qopt-prefetch -auto-ilp32  
-qopt-mem-layout-trans=3

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

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-ic17.0-official-linux64.html>

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

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

<http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-110i-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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.

Report generated on Tue May 30 15:31:54 2017 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 30 May 2017.