



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/GT110b  
(Intel Xeon X3430)

SPECfp<sup>®</sup>\_rate2006 = 75.6

SPECfp\_rate\_base2006 = 73.1

CPU2006 license: 9006

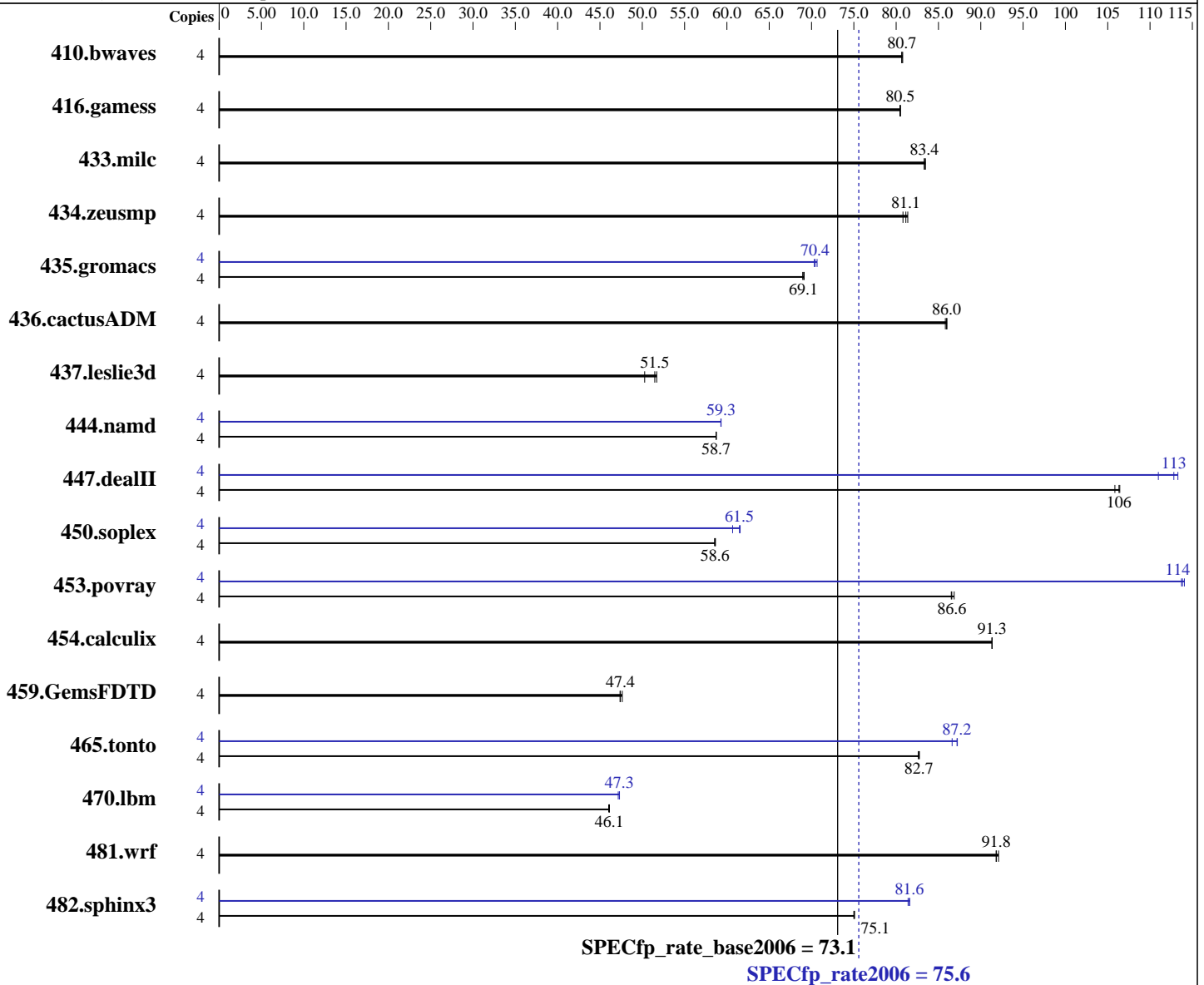
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Feb-2010

Hardware Availability: Apr-2010

Software Availability: Nov-2009



### Hardware

CPU Name: Intel Xeon X3430  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
 CPU MHz: 2400  
 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: SUSE Linux Enterprise Server 11 (x86\_64),  
Kernel 2.6.27.19-5-default  
 Compiler: Intel C++ and Fortran Professional Compiler for  
IA32 and Intel 64, Version 11.1  
Build 20091012 Package ID: l\_cproc\_p\_11.1.059,  
l\_cprof\_p\_11.1.059  
 Auto Parallel: No  
 File System: ext3  
 System State: Run level 3 (multi-user)

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/GT110b  
(Intel Xeon X3430)

SPECfp\_rate2006 = 75.6

SPECfp\_rate\_base2006 = 73.1

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Feb-2010

Hardware Availability: Apr-2010

Software Availability: Nov-2009

L3 Cache: 8 MB I+D on chip per chip  
Other Cache: None  
Memory: 8 GB (2 x 4 GB PC3-10600E, 2 rank, CL9, ECC)  
Disk Subsystem: 1x160 GB SATA, 7200 RPM  
Other Hardware: None

Base Pointers: 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	4	673	80.8	674	80.7	<b>674</b>	<b>80.7</b>	4	673	80.8	674	80.7	<b>674</b>	<b>80.7</b>
416.gamess	4	<b>973</b>	<b>80.5</b>	974	80.4	973	80.5	4	<b>973</b>	<b>80.5</b>	974	80.4	973	80.5
433.milc	4	441	83.3	<b>441</b>	<b>83.4</b>	440	83.5	4	441	83.3	<b>441</b>	<b>83.4</b>	440	83.5
434.zeusmp	4	450	80.8	<b>449</b>	<b>81.1</b>	447	81.4	4	450	80.8	<b>449</b>	<b>81.1</b>	447	81.4
435.gromacs	4	<b>414</b>	<b>69.1</b>	413	69.1	414	69.0	4	404	70.7	406	70.3	<b>406</b>	<b>70.4</b>
436.cactusADM	4	<b>556</b>	<b>86.0</b>	556	86.0	557	85.8	4	<b>556</b>	<b>86.0</b>	556	86.0	557	85.8
437.leslie3d	4	727	51.7	748	50.3	<b>730</b>	<b>51.5</b>	4	727	51.7	748	50.3	<b>730</b>	<b>51.5</b>
444.namd	4	546	58.8	<b>546</b>	<b>58.7</b>	546	58.7	4	541	59.3	541	59.3	<b>541</b>	<b>59.3</b>
447.dealII	4	430	106	<b>430</b>	<b>106</b>	432	106	4	<b>406</b>	<b>113</b>	412	111	404	113
450.soplex	4	569	58.6	570	58.5	<b>569</b>	<b>58.6</b>	4	550	60.7	<b>543</b>	<b>61.5</b>	542	61.6
453.povray	4	245	86.9	246	86.5	<b>246</b>	<b>86.6</b>	4	187	114	187	114	<b>187</b>	<b>114</b>
454.calculix	4	361	91.3	<b>361</b>	<b>91.3</b>	361	91.3	4	361	91.3	<b>361</b>	<b>91.3</b>	361	91.3
459.GemsFDTD	4	<b>895</b>	<b>47.4</b>	891	47.6	896	47.4	4	<b>895</b>	<b>47.4</b>	891	47.6	896	47.4
465.tonto	4	476	82.6	<b>476</b>	<b>82.7</b>	476	82.7	4	451	87.2	454	86.6	<b>451</b>	<b>87.2</b>
470.lbm	4	1194	46.0	<b>1192</b>	<b>46.1</b>	1192	46.1	4	1165	47.2	1162	47.3	<b>1162</b>	<b>47.3</b>
481.wrf	4	485	92.1	487	91.8	<b>487</b>	<b>91.8</b>	4	485	92.1	487	91.8	<b>487</b>	<b>91.8</b>
482.sphinx3	4	1039	75.0	<b>1039</b>	<b>75.1</b>	1038	75.1	4	958	81.4	955	81.6	<b>956</b>	<b>81.6</b>

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

## Submit Notes

The config file option 'submit' was used.  
numactl was used to bind copies to the cores

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run

## Platform Notes

Default BIOS settings were used.



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/GT110b  
(Intel Xeon X3430)

**SPECfp\_rate2006 = 75.6**

**SPECfp\_rate\_base2006 = 73.1**

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

**Test date:** Feb-2010  
**Hardware Availability:** Apr-2010  
**Software Availability:** Nov-2009

## 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.lelie3d: -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:  
-xSSE4.2 -ipo -O3 -no-prec-div -static

C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -static

Fortran benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -static

Benchmarks using both Fortran and C:  
-xSSE4.2 -ipo -O3 -no-prec-div -static



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/GT110b  
(Intel Xeon X3430)

SPECfp\_rate2006 = 75.6

SPECfp\_rate\_base2006 = 73.1

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Feb-2010

Hardware Availability: Apr-2010

Software Availability: Nov-2009

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

482.sphinx3: icc -m32

C++ benchmarks (except as noted below):

icpc -m64

450.soplex: icpc -m32

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  
 437.leslie3d: -DSPEC\_CPU\_LP64  
 444.namd: -DSPEC\_CPU\_LP64  
 447.dealII: -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

## Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
 -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
 -opt-malloc-options=3 -ansi-alias -auto-ilp32

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/GT110b  
(Intel Xeon X3430)

**SPECfp\_rate2006 = 75.6**

**SPECfp\_rate\_base2006 = 73.1**

**CPU2006 license:** 9006

**Test sponsor:** NEC Corporation

**Tested by:** NEC Corporation

**Test date:** Feb-2010

**Hardware Availability:** Apr-2010

**Software Availability:** Nov-2009

## Peak Optimization Flags (Continued)

C++ benchmarks:

444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-fno-alias -auto-ilp32

447.dealIII: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-unroll2 -ansi-alias -scalar-rep-

450.soplex: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-opt-malloc-options=3

453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: basepeak = yes

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-unroll4 -auto -inline-calloc -opt-malloc-options=3

Benchmarks using both Fortran and C:

435.gromacs: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)  
-opt-prefetch -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-fp-linux64-revE.20100302.html>



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/GT110b  
(Intel Xeon X3430)

**SPECfp\_rate2006 = 75.6**

**SPECfp\_rate\_base2006 = 73.1**

**CPU2006 license:** 9006

**Test sponsor:** NEC Corporation

**Tested by:** NEC Corporation

**Test date:** Feb-2010

**Hardware Availability:** Apr-2010

**Software Availability:** Nov-2009

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-fp-linux64-revE.20100302.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 v1.1.  
Report generated on Wed Jul 23 07:10:29 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 11 May 2010.