



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/GT120a  
(Intel Xeon E5502)

SPECfp<sup>®</sup>\_rate2006 = 36.3

SPECfp\_rate\_base2006 = 35.1

CPU2006 license: 9006

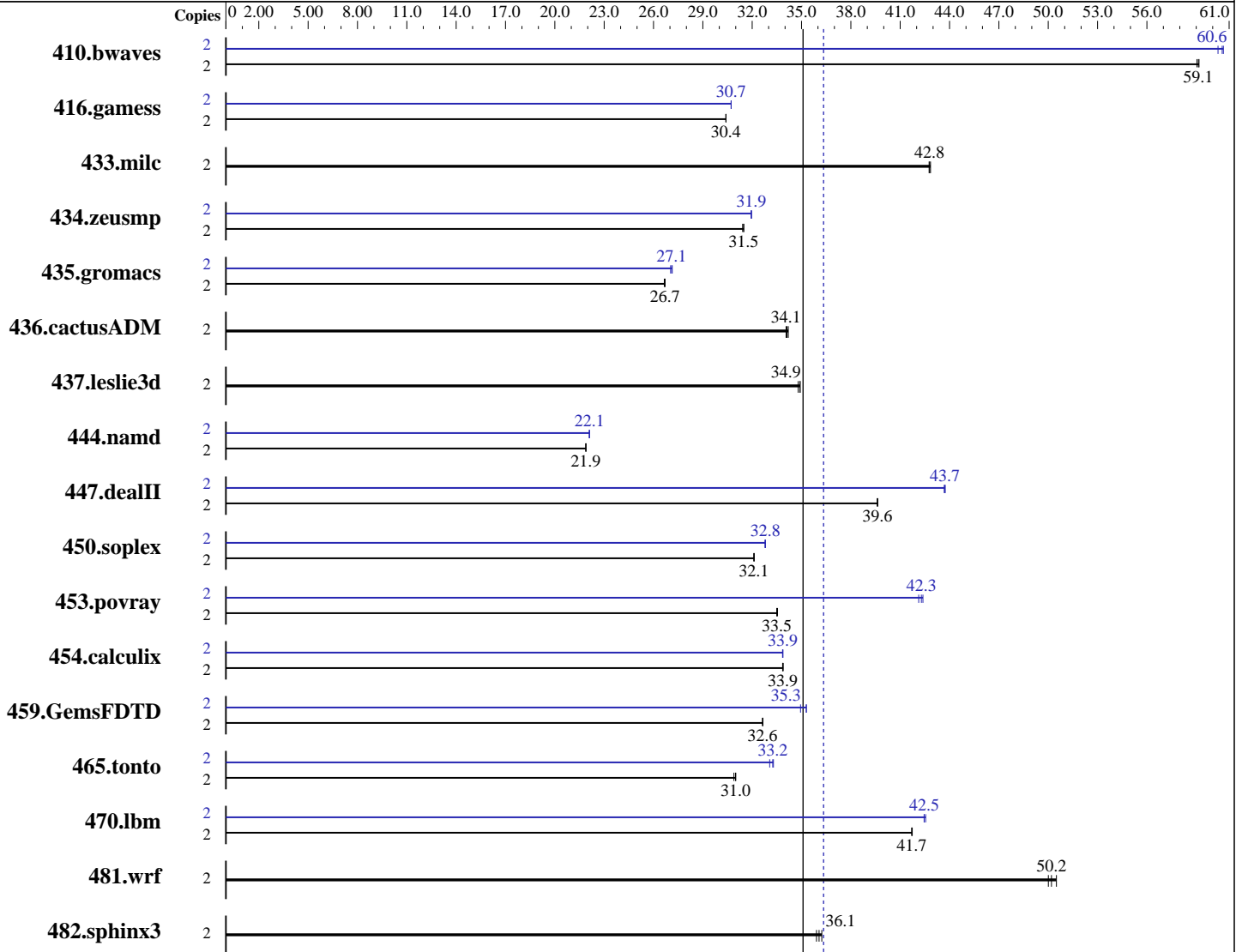
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Jun-2009

Hardware Availability: Apr-2009

Software Availability: Feb-2009



SPECfp\_rate\_base2006 = 35.1

SPECfp\_rate2006 = 36.3

### Hardware

CPU Name: Intel Xeon E5502  
 CPU Characteristics:  
 CPU MHz: 1867  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 1 chip, 2 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: SUSE Linux Enterprise Server 10 (x86\_64)  
 SP2 with patch Linux kernel 20090119,  
 Kernel 2.6.16.60-0.34-smp  
 Compiler: Intel C++ and Fortran Compiler Professional 11.0  
 for Linux  
 Build 20090131 Package ID: l\_cproc\_p\_11.0.081,  
 l\_cprof\_p\_11.0.081  
 Auto Parallel: No  
 File System: ReiserFS

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/GT120a  
(Intel Xeon E5502)

SPECfp\_rate2006 = 36.3

SPECfp\_rate\_base2006 = 35.1

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Jun-2009

Hardware Availability: Apr-2009

Software Availability: Feb-2009

L3 Cache: 4 MB I+D on chip per chip  
Other Cache: None  
Memory: 24 GB (6 X 4 GB PC3-8500R running at 800 MHz)  
Disk Subsystem: 1x160 GB SATA2, 7200 RPM  
Other Hardware: None

System State: Run level 3 (multi-user)  
Base Pointers: 64-bit  
Peak Pointers: 32/64-bit  
Other Software: Binutils 2.18.50.0.7.20080502

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2	459	59.2	<b>460</b>	<b>59.1</b>	460	59.0	2	451	60.3	<b>449</b>	<b>60.6</b>	448	60.7
416.gamess	2	1288	30.4	1288	30.4	<b>1288</b>	<b>30.4</b>	2	1275	30.7	1275	30.7	<b>1275</b>	<b>30.7</b>
433.milc	2	<b>429</b>	<b>42.8</b>	429	42.8	429	42.8	2	<b>429</b>	<b>42.8</b>	429	42.8	429	42.8
434.zeusmp	2	579	31.4	<b>578</b>	<b>31.5</b>	578	31.5	2	570	31.9	570	32.0	<b>570</b>	<b>31.9</b>
435.gromacs	2	536	26.7	535	26.7	<b>535</b>	<b>26.7</b>	2	526	27.1	<b>527</b>	<b>27.1</b>	528	27.0
436.cactusADM	2	<b>701</b>	<b>34.1</b>	702	34.1	699	34.2	2	<b>701</b>	<b>34.1</b>	702	34.1	699	34.2
437.leslie3d	2	538	34.9	540	34.8	<b>539</b>	<b>34.9</b>	2	538	34.9	540	34.8	<b>539</b>	<b>34.9</b>
444.namd	2	733	21.9	<b>733</b>	<b>21.9</b>	733	21.9	2	<b>726</b>	<b>22.1</b>	726	22.1	726	22.1
447.dealII	2	<b>578</b>	<b>39.6</b>	578	39.6	577	39.6	2	523	43.7	<b>523</b>	<b>43.7</b>	524	43.7
450.soplex	2	<b>520</b>	<b>32.1</b>	519	32.1	520	32.1	2	509	32.8	<b>509</b>	<b>32.8</b>	509	32.8
453.povray	2	318	33.5	317	33.5	<b>318</b>	<b>33.5</b>	2	251	42.4	<b>252</b>	<b>42.3</b>	253	42.1
454.calculix	2	487	33.9	487	33.9	<b>487</b>	<b>33.9</b>	2	487	33.9	<b>487</b>	<b>33.9</b>	488	33.8
459.GemsFDTD	2	<b>650</b>	<b>32.6</b>	650	32.6	650	32.7	2	607	34.9	<b>601</b>	<b>35.3</b>	601	35.3
465.tonto	2	635	31.0	<b>635</b>	<b>31.0</b>	637	30.9	2	<b>592</b>	<b>33.2</b>	591	33.3	595	33.1
470.lbm	2	659	41.7	658	41.7	<b>659</b>	<b>41.7</b>	2	647	42.5	<b>647</b>	<b>42.5</b>	646	42.5
481.wrf	2	<b>445</b>	<b>50.2</b>	447	50.0	442	50.5	2	<b>445</b>	<b>50.2</b>	447	50.0	442	50.5
482.sphinx3	2	1085	35.9	1076	36.2	<b>1081</b>	<b>36.1</b>	2	1085	35.9	1076	36.2	<b>1081</b>	<b>36.1</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/GT120a  
(Intel Xeon E5502)

**SPECfp\_rate2006 = 36.3**

**SPECfp\_rate\_base2006 = 35.1**

**CPU2006 license:** 9006

**Test sponsor:** NEC Corporation

**Tested by:** NEC Corporation

**Test date:** Jun-2009

**Hardware Availability:** Apr-2009

**Software Availability:** Feb-2009

## Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icc ifort

## 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:

-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/GT120a  
(Intel Xeon E5502)

**SPECfp\_rate2006 = 36.3**

**SPECfp\_rate\_base2006 = 35.1**

**CPU2006 license:** 9006

**Test sponsor:** NEC Corporation

**Tested by:** NEC Corporation

**Test date:** Jun-2009

**Hardware Availability:** Apr-2009

**Software Availability:** Feb-2009

## Peak Compiler Invocation

C benchmarks:

icc

C++ benchmarks (except as noted below):

icpc

450.soplex: icpc -m32

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icc ifort

## 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  
 482.sphinx3: -DSPEC\_CPU\_LP64

## Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch  
-auto-ilp32

482.sphinx3: basepeak = yes

C++ benchmarks:

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/GT120a  
(Intel Xeon E5502)

SPECfp\_rate2006 = 36.3

SPECfp\_rate\_base2006 = 35.1

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

Test date: Jun-2009  
Hardware Availability: Apr-2009  
Software Availability: Feb-2009

## Peak Optimization Flags (Continued)

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.dealII: -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: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

416.gamess: -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 -Ob0 -ansi-alias -scalar-rep-

434.zeusmp: -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)

437.leslie3d: basepeak = yes

459.GemsFDTD: -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 -Ob0 -opt-prefetch

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

### 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: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32

481.wrf: basepeak = yes



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/GT120a  
(Intel Xeon E5502)

**SPECfp\_rate2006 = 36.3**

**SPECfp\_rate\_base2006 = 35.1**

**CPU2006 license:** 9006

**Test sponsor:** NEC Corporation

**Tested by:** NEC Corporation

**Test date:** Jun-2009

**Hardware Availability:** Apr-2009

**Software Availability:** Feb-2009

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revG.html>

<http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revE.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revG.xml>

<http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revE.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 02:24:37 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 7 July 2009.