



# SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/120Rg-1  
(Intel Xeon processor 5160)

SPECfp®\_rate2006 = 44.2

SPECfp\_rate\_base2006 = 42.9

CPU2006 license: 9006

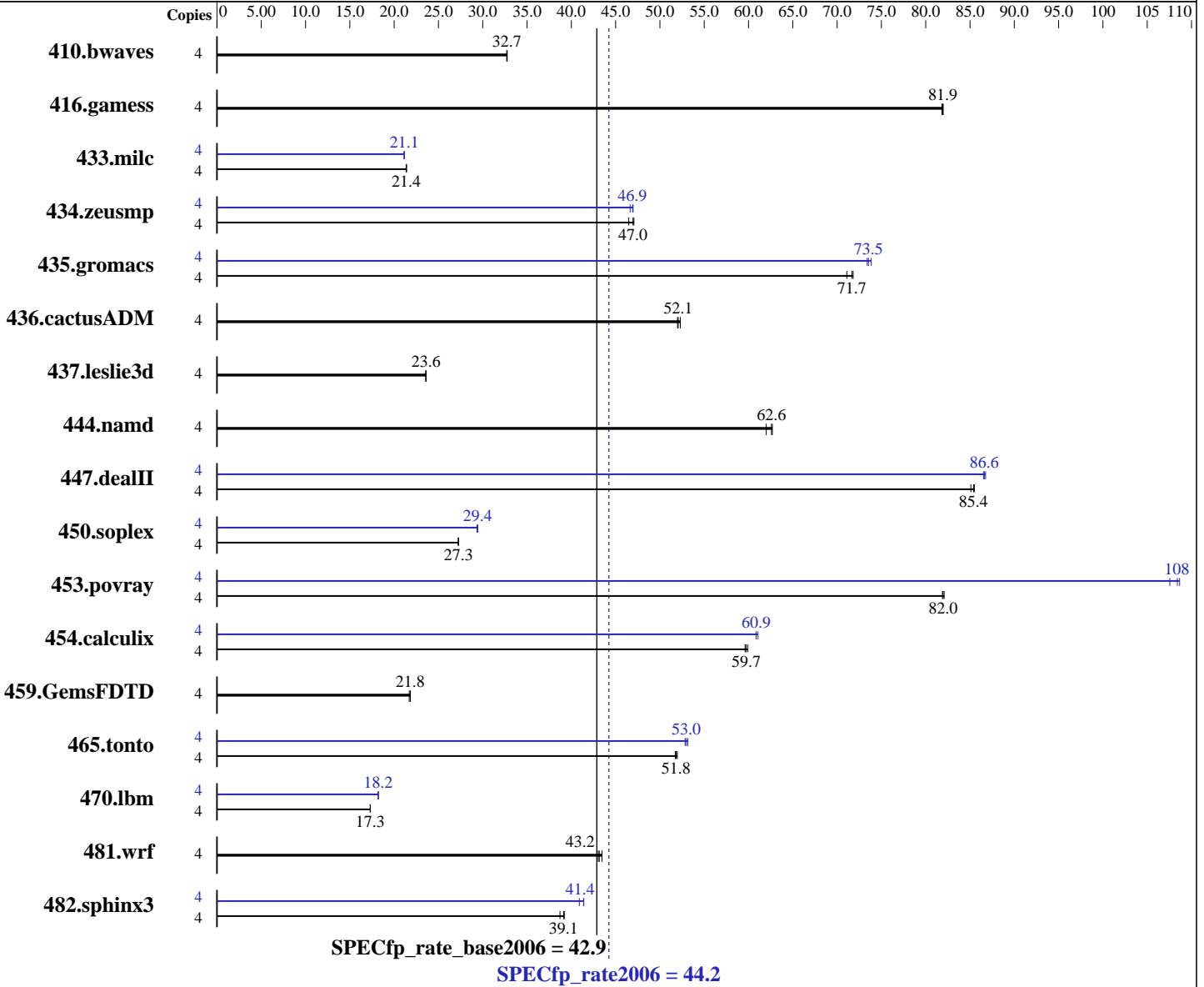
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: May-2007

Hardware Availability: May-2007

Software Availability: Apr-2007



**Hardware**

CPU Name: Intel Xeon 5160  
 CPU Characteristics: 3.00 GHz, 4MB L2, 1333MHz bus  
 CPU MHz: 3000  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 4 MB I+D on chip per chip

Continued on next page

**Software**

Operating System: 64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp on an x86\_64  
 Compiler: Intel C++ Compiler for IA32/EM64T application, Version 9.1 - Build 20070320, Package-ID: l\_cc\_c\_9.1.049  
 Intel Fortran Compiler for IA32/EM64T application, Version 9.1 - Build 20070320, Package ID: l\_fc\_c\_9.1.045  
 Auto Parallel: No  
 File System: ReiserFS

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/120Rg-1  
(Intel Xeon processor 5160)

SPECfp\_rate2006 = 44.2

SPECfp\_rate\_base2006 = 42.9

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

Test date: May-2007  
Hardware Availability: May-2007  
Software Availability: Apr-2007

L3 Cache: None  
Other Cache: None  
Memory: 8 GB (4x2 GB DDR2 5300F, 2 rank, CL5-5-5, ECC)  
Disk Subsystem: 1x146.5 GB SAS, 15000RPM  
Other Hardware: None

System State: Multiuser, Runlevel 3  
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	<b>1661</b>	<b>32.7</b>	1659	32.8	1662	32.7	4	<b>1661</b>	<b>32.7</b>	1659	32.8	1662	32.7
416.gamess	4	956	82.0	<b>956</b>	<b>81.9</b>	957	81.8	4	956	82.0	<b>956</b>	<b>81.9</b>	957	81.8
433.milc	4	1716	21.4	1720	21.4	<b>1717</b>	<b>21.4</b>	4	1736	21.1	1738	21.1	<b>1737</b>	<b>21.1</b>
434.zeusmp	4	<b>775</b>	<b>47.0</b>	773	47.1	783	46.5	4	<b>776</b>	<b>46.9</b>	775	47.0	780	46.6
435.gromacs	4	<b>399</b>	<b>71.7</b>	402	71.1	398	71.8	4	<b>388</b>	<b>73.5</b>	389	73.4	387	73.9
436.cactusADM	4	914	52.3	919	52.0	<b>918</b>	<b>52.1</b>	4	914	52.3	919	52.0	<b>918</b>	<b>52.1</b>
437.leslie3d	4	1592	23.6	<b>1593</b>	<b>23.6</b>	1596	23.6	4	1592	23.6	<b>1593</b>	<b>23.6</b>	1596	23.6
444.namd	4	<b>513</b>	<b>62.6</b>	512	62.7	517	62.0	4	<b>513</b>	<b>62.6</b>	512	62.7	517	62.0
447.dealII	4	538	85.1	<b>536</b>	<b>85.4</b>	535	85.5	4	529	86.5	<b>528</b>	<b>86.6</b>	527	86.8
450.soplex	4	1225	27.2	1223	27.3	<b>1224</b>	<b>27.3</b>	4	1137	29.4	<b>1134</b>	<b>29.4</b>	1134	29.4
453.povray	4	<b>260</b>	<b>82.0</b>	259	82.1	260	81.9	4	198	108	196	109	<b>196</b>	<b>108</b>
454.calculix	4	<b>552</b>	<b>59.7</b>	554	59.6	551	59.9	4	540	61.1	<b>542</b>	<b>60.9</b>	542	60.9
459.GemsFDTD	4	1956	21.7	1944	21.8	<b>1944</b>	<b>21.8</b>	4	1956	21.7	1944	21.8	<b>1944</b>	<b>21.8</b>
465.tonto	4	757	52.0	<b>759</b>	<b>51.8</b>	761	51.7	4	<b>743</b>	<b>53.0</b>	745	52.8	741	53.1
470.lbm	4	3176	17.3	<b>3175</b>	<b>17.3</b>	3175	17.3	4	3017	18.2	<b>3017</b>	<b>18.2</b>	3018	18.2
481.wrf	4	<b>1035</b>	<b>43.2</b>	1028	43.5	1038	43.0	4	<b>1035</b>	<b>43.2</b>	1028	43.5	1038	43.0
482.sphinx3	4	2013	38.7	<b>1992</b>	<b>39.1</b>	1988	39.2	4	1906	40.9	1883	41.4	<b>1884</b>	<b>41.4</b>

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

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run  
'/usr/bin/taskset' used to bind processes to CPUs

## General Notes

The system bus runs at 1333 MHz  
All binaries were built with 64-bit Intel compiler except:  
433.milc, 434.zeusmp, 450.soplex, 470.lbm and 482.sphinx3 in peak were built with  
32-bit Intel compiler by changing the path for include and library files.

The Express5800/120Rg-1 and the Express5800/120Ri-2 models are  
electronically equivalent.  
The results have been measured on a Express5800/120Ri-2 model.



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/120Rg-1  
(Intel Xeon processor 5160)

**SPECfp\_rate2006 = 44.2**

**SPECfp\_rate\_base2006 = 42.9**

**CPU2006 license:** 9006

**Test sponsor:** NEC Corporation

**Tested by:** NEC Corporation

**Test date:** May-2007

**Hardware Availability:** May-2007

**Software Availability:** Apr-2007

## 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:

-fast

C++ benchmarks:

-fast

Fortran benchmarks:

-fast

Benchmarks using both Fortran and C:

-fast



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/120Rg-1  
(Intel Xeon processor 5160)

**SPECfp\_rate2006 = 44.2**

**SPECfp\_rate\_base2006 = 42.9**

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

**Test date:** May-2007  
**Hardware Availability:** May-2007  
**Software Availability:** Apr-2007

## Peak Compiler Invocation

C benchmarks:

```
/opt/intel/cc/9.1.049/bin/icc -I/opt/intel/cc/9.1.049/include  
-L/opt/intel/cc/9.1.049/lib
```

C++ benchmarks (except as noted below):

icpc

```
450.soplex: /opt/intel/cc/9.1.049/bin/icpc  
-I/opt/intel/cc/9.1.049/include -L/opt/intel/cc/9.1.049/lib
```

Fortran benchmarks (except as noted below):

ifort

```
434.zeusmp: /opt/intel/fc/9.1.045/bin/ifort  
-I/opt/intel/fc/9.1.045/include -L/opt/intel/fc/9.1.045/lib
```

Benchmarks using both Fortran and C:

icc ifort

## Peak Portability Flags

```
410.bwaves: -DSPEC_CPU_LP64  
416.gamess: -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  
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
```

## Peak Optimization Flags

C benchmarks:

```
433.milc: -prof_gen(pass 1) -prof_use(pass 2) -fast
```

```
470.lbm: Same as 433.milc
```

```
482.sphinx3: -fast
```

C++ benchmarks:

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/120Rg-1  
(Intel Xeon processor 5160)

SPECfp\_rate2006 = 44.2

SPECfp\_rate\_base2006 = 42.9

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

**Test date:** May-2007  
**Hardware Availability:** May-2007  
**Software Availability:** Apr-2007

## Peak Optimization Flags (Continued)

444.namd: basepeak = yes

447.dealII: -prof\_gen(pass 1) -prof\_use(pass 2) -fast

450.soplex: Same as 447.dealII

453.povray: Same as 447.dealII

### Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: basepeak = yes

434.zeusmp: -fast

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -prof\_gen(pass 1) -prof\_use(pass 2) -fast

### Benchmarks using both Fortran and C:

435.gromacs: -prof\_gen(pass 1) -prof\_use(pass 2) -fast

436.cactusADM: basepeak = yes

454.calculix: Same as 435.gromacs

481.wrf: basepeak = yes

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

<http://www.spec.org/cpu2006/flags/NEC-ic91-linux-flags.20090714.html>

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

<http://www.spec.org/cpu2006/flags/NEC-ic91-linux-flags.20090714.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 v1.0.  
Report generated on Tue Jul 22 13:02:18 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 10 July 2007.