



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/120Bb-6  
(Intel Xeon 5148 LV)

SPECfp<sup>®</sup>2006 = 17.6

SPECfp\_base2006 = 15.3

CPU2006 license: 9006

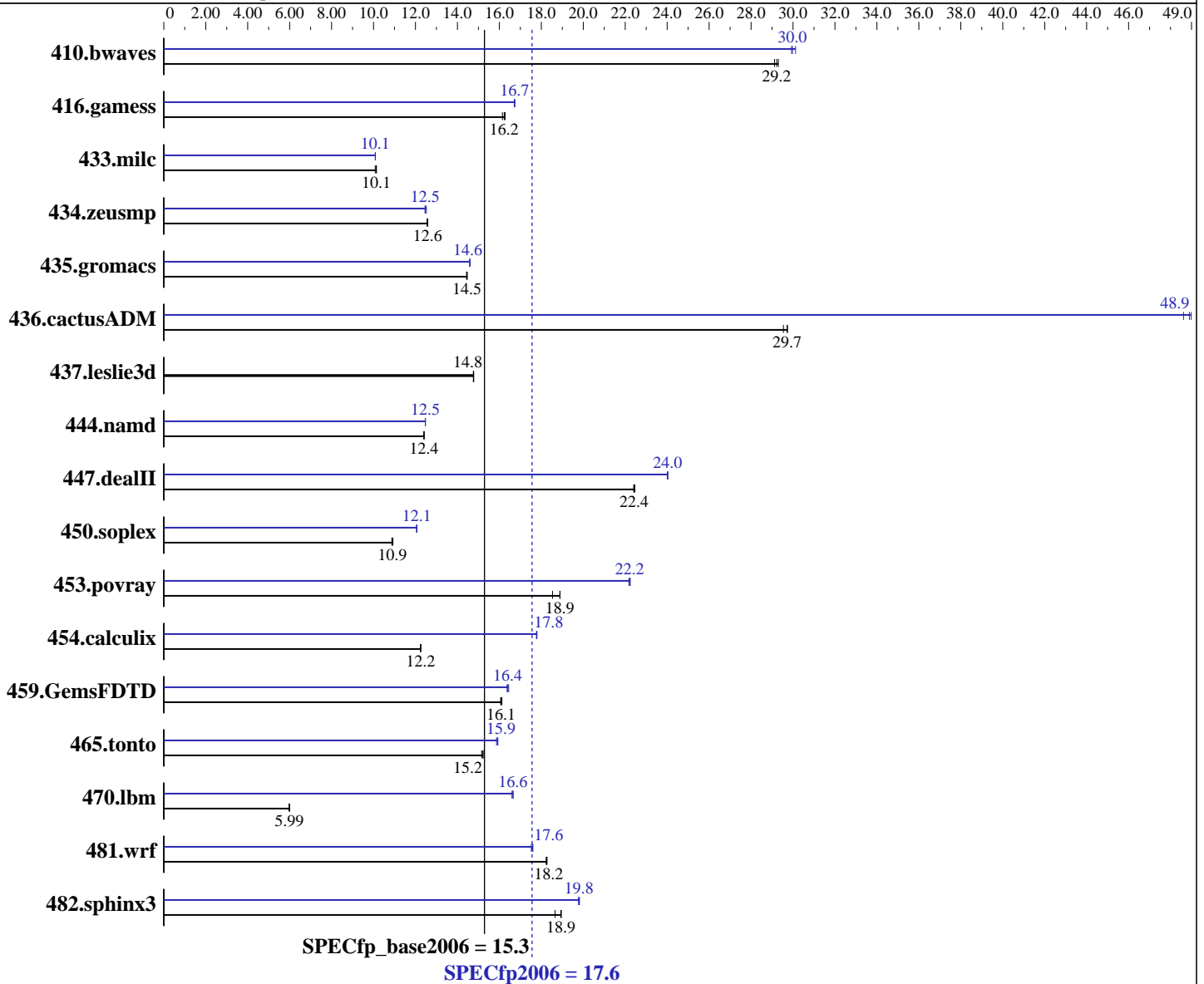
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Feb-2008

Hardware Availability: May-2007

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Xeon 5148 LV  
 CPU Characteristics: 2.33 GHz, 4 MB L2, 1333 MHz bus  
 CPU MHz: 2333  
 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: SUSE Linux Enterprise Server 10 (x86\_64) SP1, Kernel 2.6.16.46-0.12-smp  
 Compiler: Intel C++ and Fortran Compiler for Linux32 and Linux64 version 10.1 Build 20070913 Package ID: l\_cc\_p\_10.1.008, l\_fc\_p\_10.1.008  
 Auto Parallel: Yes  
 File System: ext2

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/120Bb-6  
(Intel Xeon 5148 LV)

SPECfp2006 = 17.6

SPECfp\_base2006 = 15.3

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

Test date: Feb-2008  
Hardware Availability: May-2007  
Software Availability: Nov-2007

L3 Cache: None  
Other Cache: None  
Memory: 8 GB (4x2 GB PC2-5300F, 2 rank, CL5-5-5, ECC)  
Disk Subsystem: 1x73.2 GB SAS, 10000RPM  
Other Hardware: None

System State: Run level 3 (multi-user)  
Base Pointers: 64-bit  
Peak Pointers: 32/64-bit  
Other Software: binutils-2.17.tar.gz, Version 2.17

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	467	29.1	<b>465</b>	<b>29.2</b>	464	29.3	454	29.9	451	30.1	<b>453</b>	<b>30.0</b>
416.gamess	1203	16.3	1213	16.1	<b>1206</b>	<b>16.2</b>	1170	16.7	<b>1171</b>	<b>16.7</b>	1171	16.7
433.milc	911	10.1	906	10.1	<b>906</b>	<b>10.1</b>	910	10.1	910	10.1	<b>910</b>	<b>10.1</b>
434.zeusmp	723	12.6	<b>724</b>	<b>12.6</b>	725	12.6	727	12.5	730	12.5	<b>730</b>	<b>12.5</b>
435.gromacs	495	14.4	494	14.5	<b>494</b>	<b>14.5</b>	489	14.6	<b>489</b>	<b>14.6</b>	490	14.6
436.cactusADM	402	29.7	<b>402</b>	<b>29.7</b>	405	29.5	<b>244</b>	<b>48.9</b>	244	49.0	246	48.6
437.leslie3d	637	14.8	636	14.8	<b>636</b>	<b>14.8</b>	637	14.8	636	14.8	<b>636</b>	<b>14.8</b>
444.namd	647	12.4	<b>646</b>	<b>12.4</b>	646	12.4	<b>643</b>	<b>12.5</b>	643	12.5	643	12.5
447.dealII	<b>510</b>	<b>22.4</b>	509	22.5	511	22.4	<b>476</b>	<b>24.0</b>	476	24.0	476	24.0
450.soplex	763	10.9	767	10.9	<b>765</b>	<b>10.9</b>	691	12.1	<b>692</b>	<b>12.1</b>	692	12.1
453.povray	287	18.5	<b>282</b>	<b>18.9</b>	282	18.9	239	22.2	240	22.2	<b>239</b>	<b>22.2</b>
454.calculix	673	12.3	<b>674</b>	<b>12.2</b>	674	12.2	464	17.8	464	17.8	<b>464</b>	<b>17.8</b>
459.GemsFDTD	658	16.1	661	16.1	<b>660</b>	<b>16.1</b>	<b>647</b>	<b>16.4</b>	648	16.4	645	16.4
465.tonto	649	15.2	<b>647</b>	<b>15.2</b>	647	15.2	618	15.9	<b>619</b>	<b>15.9</b>	620	15.9
470.lbm	2302	5.97	<b>2294</b>	<b>5.99</b>	2292	5.99	<b>825</b>	<b>16.6</b>	825	16.7	828	16.6
481.wrf	<b>612</b>	<b>18.2</b>	611	18.3	613	18.2	635	17.6	638	17.5	<b>635</b>	<b>17.6</b>
482.sphinx3	<b>1029</b>	<b>18.9</b>	1045	18.7	1028	19.0	<b>985</b>	<b>19.8</b>	983	19.8	986	19.8

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  
OMP\_NUM\_THREADS set to number of cores

## General Notes

All benchmarks compiled in 64-bit mode except 450.soplex,  
470.lbm and 482.sphinx3, for peak, are compiled in 32-bit mode



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/120Bb-6  
(Intel Xeon 5148 LV)

**SPECfp2006 = 17.6**

**SPECfp\_base2006 = 15.3**

**CPU2006 license:** 9006

**Test sponsor:** NEC Corporation

**Tested by:** NEC Corporation

**Test date:** Feb-2008

**Hardware Availability:** May-2007

**Software Availability:** Nov-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 -parallel

C++ benchmarks:

-fast -parallel

Fortran benchmarks:

-fast -parallel

Benchmarks using both Fortran and C:

-fast -parallel



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/120Bb-6  
(Intel Xeon 5148 LV)

**SPECfp2006 = 17.6**

**SPECfp\_base2006 = 15.3**

**CPU2006 license:** 9006

**Test sponsor:** NEC Corporation

**Tested by:** NEC Corporation

**Test date:** Feb-2008

**Hardware Availability:** May-2007

**Software Availability:** Nov-2007

## Peak Compiler Invocation

C benchmarks (except as noted below):

```
/opt/intel/cc/10.1.008/bin/icc -L/opt/intel/cc/10.1.008/lib
-I/opt/intel/cc/10.1.008/include
```

433.milc: icc

C++ benchmarks (except as noted below):

icpc

```
450.soplex: /opt/intel/cc/10.1.008/bin/icpc -L/opt/intel/cc/10.1.008/lib
-I/opt/intel/cc/10.1.008/include
```

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
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 -fno-alias
-auto-ilp32
```

```
470.lbm: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-scalar-req- -prefetch -opt-malloc-options=3
```

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/120Bb-6  
(Intel Xeon 5148 LV)

**SPECfp2006 = 17.6**

**SPECfp\_base2006 = 15.3**

**CPU2006 license:** 9006

**Test sponsor:** NEC Corporation

**Tested by:** NEC Corporation

**Test date:** Feb-2008

**Hardware Availability:** May-2007

**Software Availability:** Nov-2007

## Peak Optimization Flags (Continued)

482.sphinx3: -fast -unroll2

### C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias  
-auto-ilp32

447.dealIII: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-ansi-alias -scalar-rep-

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -fast  
-opt-malloc-options=3

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4  
-ansi-alias

### Fortran benchmarks:

410.bwaves: -fast -prefetch -parallel

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0  
-ansi-alias -scalar-rep-

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -fast

437.leslie3d: basepeak = yes

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0  
-prefetch -parallel

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto

### Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch  
-auto-ilp32

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-prefetch -parallel -auto-ilp32

454.calculix: -fast -unroll-aggressive -auto-ilp32

481.wrf: -fast -parallel -prefetch -auto-ilp32

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

<http://www.spec.org/cpu2006/flags/NEC-Intel-ic10.1-FP-intel64-linux-flags.20090713.html>

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

<http://www.spec.org/cpu2006/flags/NEC-Intel-ic10.1-FP-intel64-linux-flags.20090713.xml>



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/120Bb-6  
(Intel Xeon 5148 LV)

**SPECfp2006 = 17.6**

**SPECfp\_base2006 = 15.3**

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

**Test date:** Feb-2008  
**Hardware Availability:** May-2007  
**Software Availability:** Nov-2007

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 15:34:51 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 19 March 2008.