# SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

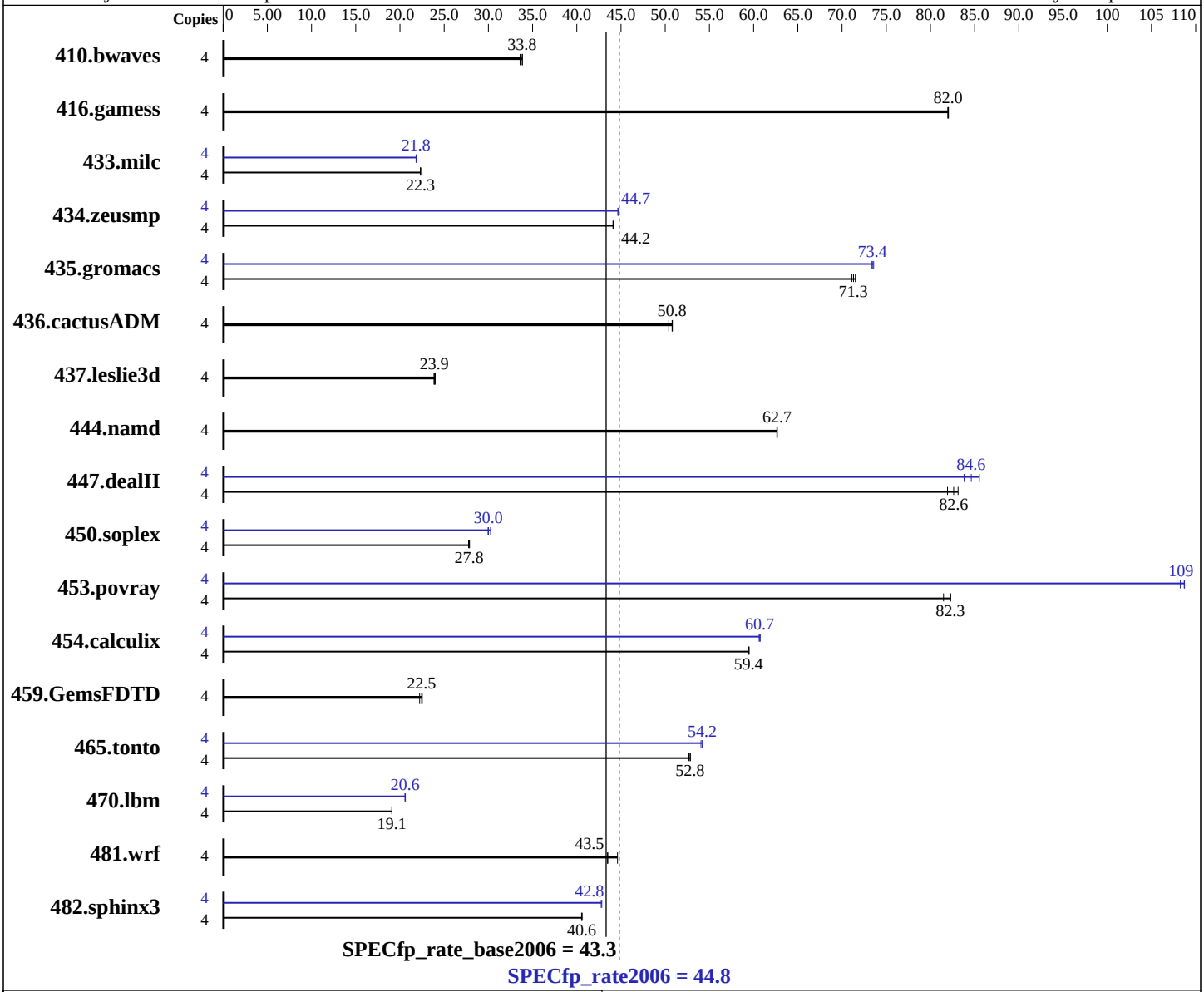
Express5800/120Li
(Intel Xeon processor 5160)

SPECfp®_rate2006 = 44.8

SPECfp_rate_base2006 = 43.3

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

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




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon 5160 |
| CPU Characteristics: | 3.00 GHz, 4 MB L2, 1333 MHz 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 for x86_64 |
| Compiler: | Intel C++ Compiler for IA32/EM64T application, Version 9.1 - Build 20070320, Package-ID: l_cc_c_9.1.049<br>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: | ext2 |

Continued on next page

# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/120Li
(Intel Xeon processor 5160)

SPECfp_rate2006 = 44.8

SPECfp_rate_base2006 = 43.3

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

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

L3 Cache: None
Other Cache: None
Memory: 8 GB (8x1 GB PC2-5300F, 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 | 1606 | 33.8 | 1619 | 33.6 | **1607** | **33.8** | 4 | 1606 | 33.8 | 1619 | 33.6 | **1607** | **33.8** |
| 416.gamess | 4 | 956 | 82.0 | **955** | **82.0** | 955 | 82.0 | 4 | 956 | 82.0 | **955** | **82.0** | 955 | 82.0 |
| 433.milc | 4 | 1646 | 22.3 | **1644** | **22.3** | 1644 | 22.3 | 4 | **1682** | **21.8** | 1683 | 21.8 | 1682 | 21.8 |
| 434.zeusmp | 4 | 826 | 44.1 | **824** | **44.2** | 824 | 44.2 | 4 | **814** | **44.7** | 816 | 44.6 | 814 | 44.7 |
| 435.gromacs | 4 | **401** | **71.3** | 402 | 71.1 | 399 | 71.5 | 4 | 389 | 73.4 | **389** | **73.4** | 388 | 73.6 |
| 436.cactusADM | 4 | 948 | 50.4 | **941** | **50.8** | 941 | 50.8 | 4 | 948 | 50.4 | **941** | **50.8** | 941 | 50.8 |
| 437.leslie3d | 4 | 1567 | 24.0 | 1576 | 23.9 | **1574** | **23.9** | 4 | 1567 | 24.0 | 1576 | 23.9 | **1574** | **23.9** |
| 444.namd | 4 | 512 | 62.6 | 512 | 62.7 | **512** | **62.7** | 4 | 512 | 62.6 | 512 | 62.7 | **512** | **62.7** |
| 447.dealII | 4 | 559 | 81.9 | 551 | 83.1 | **554** | **82.6** | 4 | **541** | **84.6** | 546 | 83.8 | 535 | 85.5 |
| 450.soplex | 4 | **1199** | **27.8** | 1202 | 27.8 | 1197 | 27.9 | 4 | **1112** | **30.0** | 1113 | 30.0 | 1103 | 30.2 |
| 453.povray | 4 | **259** | **82.3** | 259 | 82.3 | 261 | 81.5 | 4 | **196** | **109** | 196 | 109 | 197 | 108 |
| 454.calculix | 4 | 555 | 59.5 | **555** | **59.4** | 556 | 59.4 | 4 | 543 | 60.7 | **544** | **60.7** | 544 | 60.6 |
| 459.GemsFDTD | 4 | **1890** | **22.5** | 1885 | 22.5 | 1910 | 22.2 | 4 | **1890** | **22.5** | 1885 | 22.5 | 1910 | 22.2 |
| 465.tonto | 4 | **745** | **52.8** | 747 | 52.7 | 745 | 52.9 | 4 | 728 | 54.0 | 726 | 54.2 | **726** | **54.2** |
| 470.lbm | 4 | **2878** | **19.1** | 2880 | 19.1 | 2877 | 19.1 | 4 | 2671 | 20.6 | **2670** | **20.6** | 2666 | 20.6 |
| 481.wrf | 4 | 1028 | 43.5 | 1002 | 44.6 | **1027** | **43.5** | 4 | 1028 | 43.5 | 1002 | 44.6 | **1027** | **43.5** |
| 482.sphinx3 | 4 | 1920 | 40.6 | **1921** | **40.6** | 1923 | 40.5 | 4 | 1829 | 42.6 | 1820 | 42.8 | **1823** | **42.8** |

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
'/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.

## 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

## 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

# 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-FP-linux-flags.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/NEC-ic91-FP-linux-flags.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.

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 14:30:40 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 27 November 2007.