



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/120Rg-1
(Intel Xeon processor 5110)

SPECfp®_rate2006 = 29.6

SPECfp_rate_base2006 = 28.8

CPU2006 license: 9006

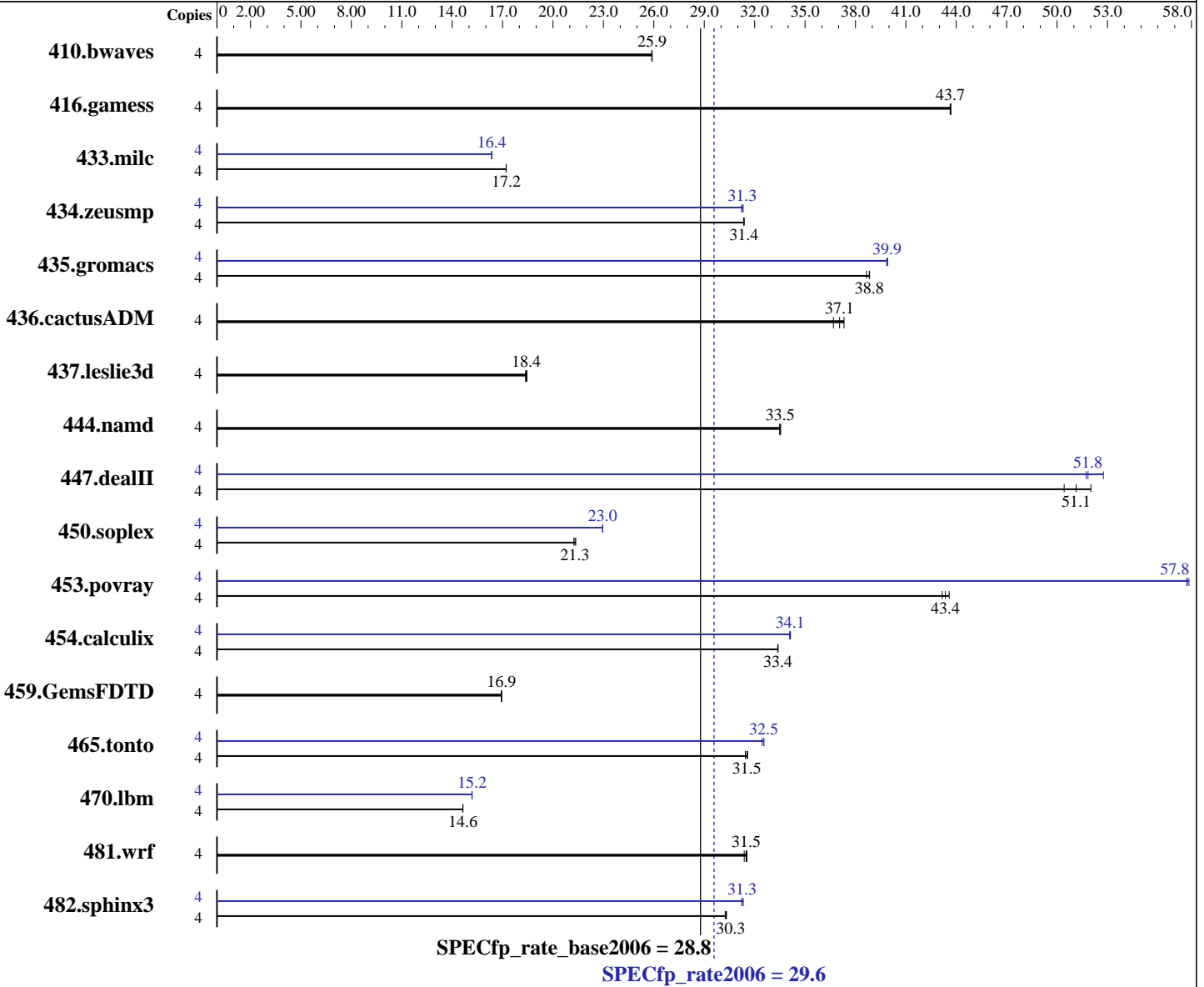
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Jun-2007

Hardware Availability: May-2007

Software Availability: Apr-2007



Hardware

CPU Name: Intel Xeon 5110
 CPU Characteristics: 1.60 GHz, 4MB L2, 1066MHz bus
 CPU MHz: 1600
 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 5110)

SPECfp_rate2006 = 29.6

SPECfp_rate_base2006 = 28.8

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

Test date: Jun-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	2099	25.9	2100	25.9	<u>2099</u>	<u>25.9</u>	4	2099	25.9	2100	25.9	<u>2099</u>	<u>25.9</u>
416.gamess	4	<u>1794</u>	<u>43.7</u>	1795	43.6	1793	43.7	4	<u>1794</u>	<u>43.7</u>	1795	43.6	1793	43.7
433.milc	4	<u>2133</u>	<u>17.2</u>	2133	17.2	2134	17.2	4	2245	16.4	<u>2245</u>	<u>16.4</u>	2245	16.4
434.zeusmp	4	1161	31.3	<u>1161</u>	<u>31.4</u>	1160	31.4	4	<u>1164</u>	<u>31.3</u>	1162	31.3	1166	31.2
435.gromacs	4	739	38.7	<u>736</u>	<u>38.8</u>	735	38.8	4	715	39.9	<u>716</u>	<u>39.9</u>	716	39.9
436.cactusADM	4	1281	37.3	<u>1290</u>	<u>37.1</u>	1303	36.7	4	1281	37.3	<u>1290</u>	<u>37.1</u>	1303	36.7
437.leslie3d	4	2038	18.4	<u>2043</u>	<u>18.4</u>	2047	18.4	4	2038	18.4	<u>2043</u>	<u>18.4</u>	2047	18.4
444.namd	4	<u>957</u>	<u>33.5</u>	956	33.6	958	33.5	4	<u>957</u>	<u>33.5</u>	956	33.6	958	33.5
447.dealII	4	880	52.0	908	50.4	<u>895</u>	<u>51.1</u>	4	885	51.7	<u>883</u>	<u>51.8</u>	867	52.8
450.soplex	4	1562	21.4	1571	21.2	<u>1566</u>	<u>21.3</u>	4	1453	23.0	<u>1453</u>	<u>23.0</u>	1454	22.9
453.povray	4	493	43.2	<u>491</u>	<u>43.4</u>	488	43.6	4	369	57.7	<u>368</u>	<u>57.8</u>	368	57.9
454.calculix	4	<u>989</u>	<u>33.4</u>	989	33.4	988	33.4	4	967	34.1	968	34.1	<u>967</u>	<u>34.1</u>
459.GemsFDTD	4	2505	16.9	2509	16.9	<u>2505</u>	<u>16.9</u>	4	2505	16.9	2509	16.9	<u>2505</u>	<u>16.9</u>
465.tonto	4	1252	31.4	1246	31.6	<u>1248</u>	<u>31.5</u>	4	1209	32.6	1213	32.4	<u>1209</u>	<u>32.5</u>
470.lbm	4	<u>3755</u>	<u>14.6</u>	3753	14.6	3757	14.6	4	<u>3620</u>	<u>15.2</u>	3621	15.2	3618	15.2
481.wrf	4	1416	31.5	1424	31.4	<u>1418</u>	<u>31.5</u>	4	1416	31.5	1424	31.4	<u>1418</u>	<u>31.5</u>
482.sphinx3	4	2577	30.2	2571	30.3	<u>2572</u>	<u>30.3</u>	4	2496	31.2	<u>2494</u>	<u>31.3</u>	2489	31.3

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 1066 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 5110)

SPECfp_rate2006 = 29.6

SPECfp_rate_base2006 = 28.8

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Jun-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 5110)

SPECfp_rate2006 = 29.6

SPECfp_rate_base2006 = 28.8

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

Test date: Jun-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 5110)

SPECfp_rate2006 = 29.6

SPECfp_rate_base2006 = 28.8

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Jun-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.

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 12:59:30 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 10 July 2007.