



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/T120a-M
(Intel Xeon E5502)

SPECfp®_rate2006 = 36.3

SPECfp_rate_base2006 = 35.1

CPU2006 license: 9006

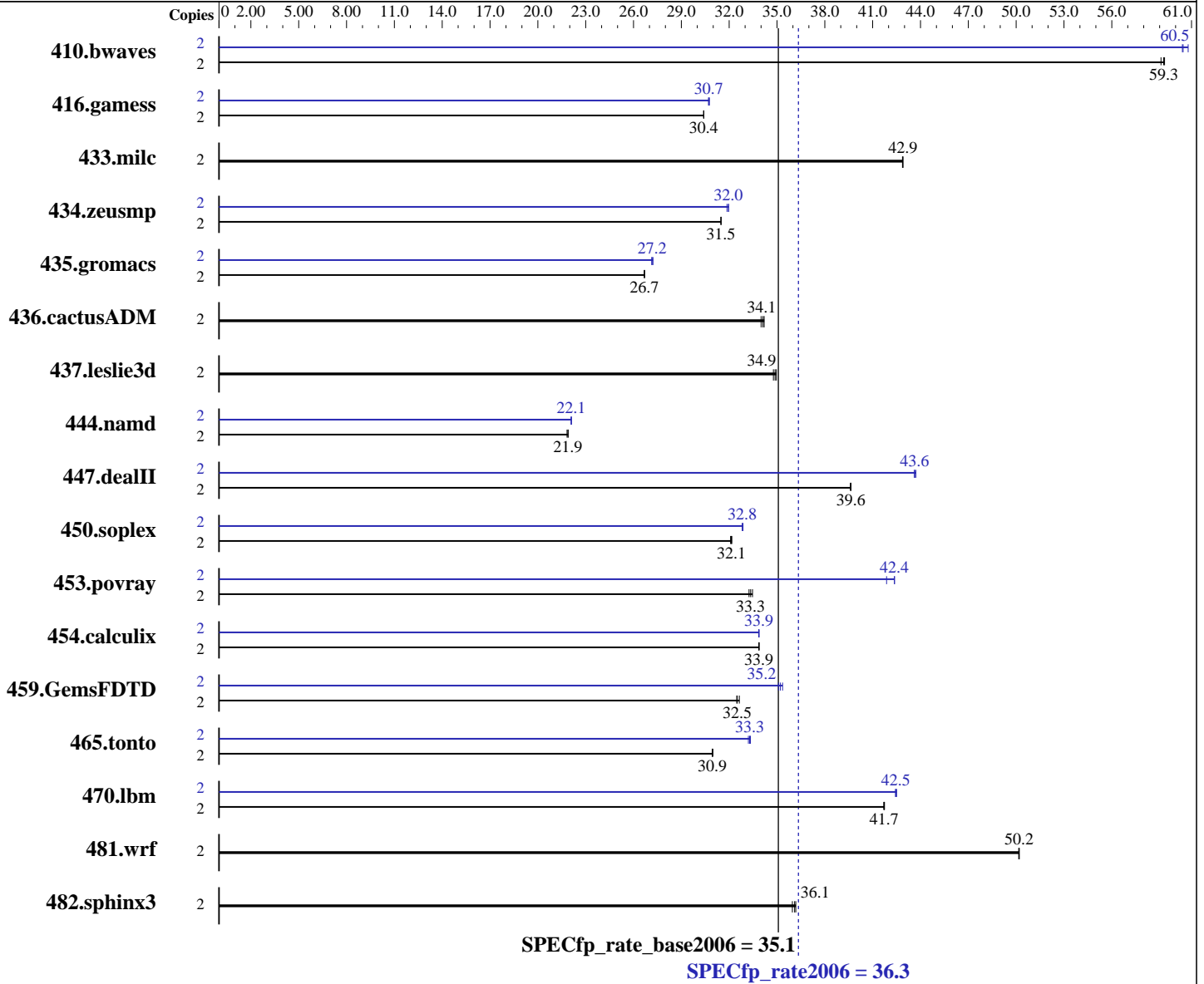
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: May-2009

Hardware Availability: Apr-2009

Software Availability: Feb-2009



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

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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/T120a-M
(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: May-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: 1x73.2 GB SAS, 15000 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	458	59.3	<u>459</u>	<u>59.3</u>	460	59.1	2	450	60.4	<u>449</u>	<u>60.5</u>	447	60.8
416.gamess	2	<u>1288</u>	<u>30.4</u>	1288	30.4	1288	30.4	2	<u>1275</u>	<u>30.7</u>	1273	30.8	1275	30.7
433.milc	2	428	42.9	<u>428</u>	<u>42.9</u>	428	42.9	2	428	42.9	<u>428</u>	<u>42.9</u>	428	42.9
434.zeusmp	2	<u>578</u>	<u>31.5</u>	578	31.5	578	31.5	2	<u>569</u>	<u>32.0</u>	569	32.0	571	31.9
435.gromacs	2	535	26.7	535	26.7	<u>535</u>	<u>26.7</u>	2	<u>526</u>	<u>27.2</u>	525	27.2	526	27.1
436.cactusADM	2	703	34.0	699	34.2	<u>701</u>	<u>34.1</u>	2	703	34.0	699	34.2	<u>701</u>	<u>34.1</u>
437.leslie3d	2	<u>539</u>	<u>34.9</u>	541	34.8	538	35.0	2	<u>539</u>	<u>34.9</u>	541	34.8	538	35.0
444.namd	2	735	21.8	<u>733</u>	<u>21.9</u>	733	21.9	2	<u>726</u>	<u>22.1</u>	726	22.1	726	22.1
447.dealII	2	578	39.6	<u>577</u>	<u>39.6</u>	577	39.6	2	<u>524</u>	<u>43.6</u>	523	43.7	525	43.6
450.soplex	2	<u>519</u>	<u>32.1</u>	520	32.1	519	32.2	2	<u>508</u>	<u>32.8</u>	508	32.8	507	32.9
453.povray	2	318	33.5	320	33.2	<u>319</u>	<u>33.3</u>	2	251	42.4	254	41.9	<u>251</u>	<u>42.4</u>
454.calculix	2	487	33.9	<u>487</u>	<u>33.9</u>	487	33.9	2	487	33.9	<u>487</u>	<u>33.9</u>	487	33.8
459.GemsFDTD	2	653	32.5	650	32.6	<u>653</u>	<u>32.5</u>	2	605	35.1	600	35.3	<u>603</u>	<u>35.2</u>
465.tonto	2	<u>636</u>	<u>30.9</u>	636	30.9	635	31.0	2	590	33.3	593	33.2	<u>591</u>	<u>33.3</u>
470.lbm	2	658	41.7	659	41.7	<u>659</u>	<u>41.7</u>	2	647	42.5	<u>647</u>	<u>42.5</u>	648	42.4
481.wrf	2	445	50.2	<u>445</u>	<u>50.2</u>	445	50.2	2	445	50.2	<u>445</u>	<u>50.2</u>	445	50.2
482.sphinx3	2	1084	36.0	1077	36.2	<u>1080</u>	<u>36.1</u>	2	1084	36.0	1077	36.2	<u>1080</u>	<u>36.1</u>

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/T120a-M
(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: May-2009

Hardware Availability: Apr-2009

Software Availability: Feb-2009

General Notes

The NEC Express5800/T120a-M(Intel Xeon E5502) and the Bull NovaScale T860 E2 (Intel Xeon E5502, 1.86 GHz) models are electronically equivalent. The results have been measured on a NEC Express5800/T120a-M(Intel Xeon E5502) model.

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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/T120a-M
(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: May-2009
Hardware Availability: Apr-2009
Software Availability: Feb-2009

Base Optimization Flags (Continued)

Fortran benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static

Benchmarks using both Fortran and C:
-xSSE4.2 -ipo -O3 -no-prec-div -static

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



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/T120a-M
(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: May-2009
Hardware Availability: Apr-2009
Software Availability: Feb-2009

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:

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:

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/T120a-M
(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: May-2009

Hardware Availability: Apr-2009

Software Availability: Feb-2009

Peak Optimization Flags (Continued)

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

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.

Tested with SPEC CPU2006 v1.1.

Report generated on Wed Jul 23 02:14:30 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 7 July 2009.