SPEC® CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/B120a-d
(Intel Xeon E5504)

$SPECfp®\_rate2006 = \quad 115$

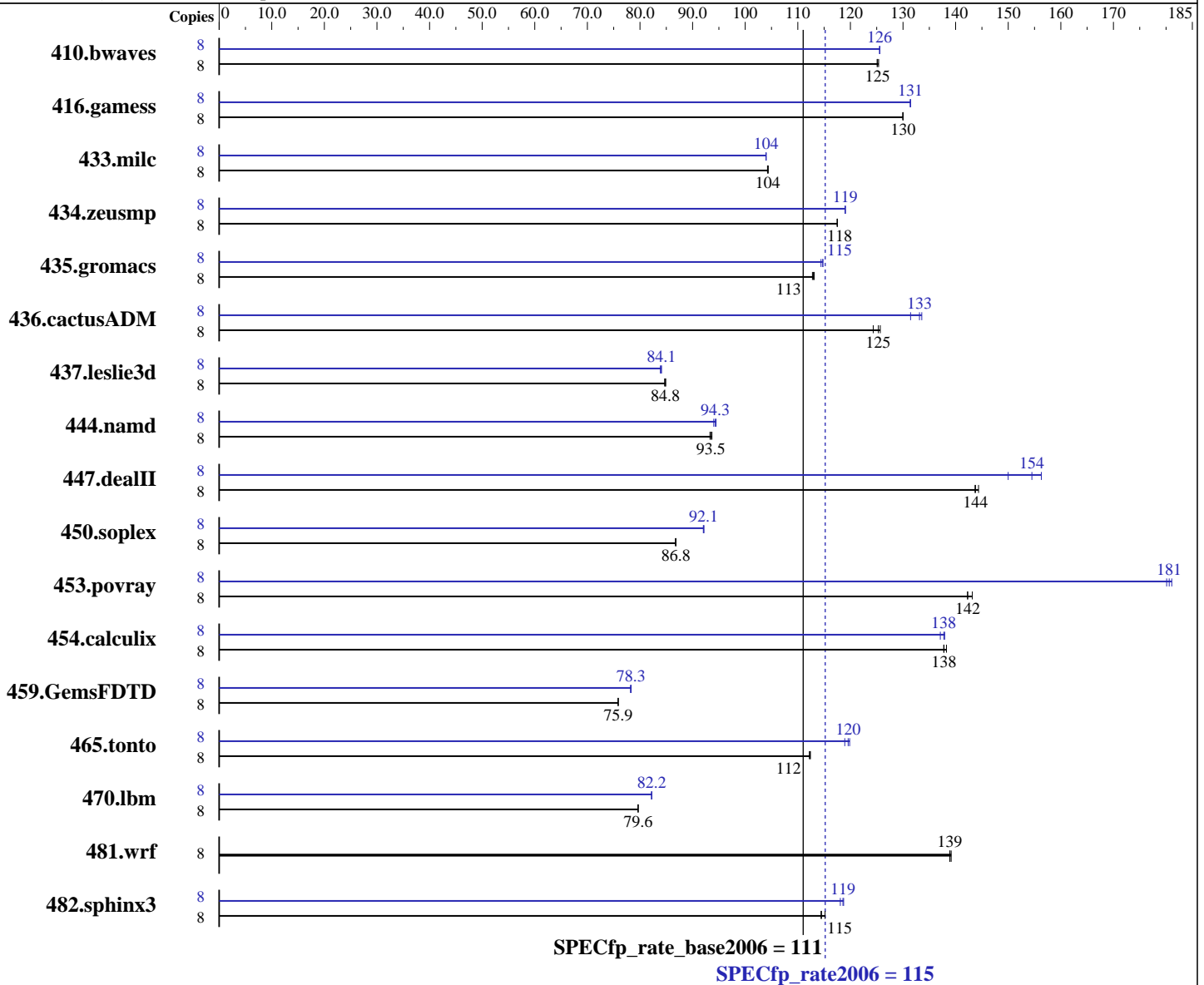$SPECfp\_rate\_base2006 = \quad 111$

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Aug-2009

Hardware Availability: Jun-2009

Software Availability: Feb-2009

SPECfp_rate_base2006 = 111

SPECfp_rate2006 = 115

Hardware

CPU Name: Intel Xeon E5504

CPU Characteristics:

CPU MHz: 2000

FPU: Integrated

CPU(s) enabled: 8 cores, 2 chips, 4 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

Continued on next page

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

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/B120a-d
(Intel Xeon E5504)

SPECfp_rate2006 =   115

SPECfp_rate_base2006 =   111

CPU2006 license: 9006	**Test date:** Aug-2009
Test sponsor: NEC Corporation	**Hardware Availability:** Jun-2009
Tested by: NEC Corporation	**Software Availability:** Feb-2009

L3 Cache:	4 MB I+D on chip per chip	System State:	Run level 3 (multi-user)
Other Cache:	None	Base Pointers:	64-bit
Memory:	48 GB (12 X 4 GB PC3-8500R running at 800 MHz)	Peak Pointers:	32/64-bit
Disk Subsystem:	1x73.2 GB SAS, 10000 RPM	Other Software:	Binutils 2.18.50.0.7.20080502
Other Hardware:	None		

Results Table

Benchmark	Base						Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	869	125	867	125	**868**	**125**	8	866	126	866	126	**866**	**126**
416.gamess	8	**1205**	**130**	1205	130	1205	130	8	1192	131	1192	131	**1192**	**131**
433.milc	8	**704**	**104**	704	104	705	104	8	707	104	**706**	**104**	706	104
434.zeusmp	8	619	118	620	117	**619**	**118**	8	612	119	611	119	**612**	**119**
435.gromacs	8	506	113	505	113	**506**	**113**	8	498	115	**498**	**115**	499	114
436.cactusADM	8	769	124	761	126	**763**	**125**	8	716	134	727	131	**718**	**133**
437.leslie3d	8	**887**	**84.8**	888	84.7	886	84.9	8	**895**	**84.1**	895	84.1	897	83.9
444.namd	8	**686**	**93.5**	688	93.3	685	93.7	8	682	94.0	**680**	**94.3**	679	94.5
447.dealII	8	**637**	**144**	634	144	637	144	8	586	156	**592**	**154**	610	150
450.soplex	8	768	86.8	769	86.7	**769**	**86.8**	8	725	92.0	724	92.1	**724**	**92.1**
453.povray	8	299	142	**299**	**142**	297	143	8	236	180	235	181	**236**	**181**
454.calculix	8	**479**	**138**	479	138	477	138	8	**479**	**138**	481	137	479	138
459.GemsFDTD	8	1119	75.9	**1119**	**75.9**	1119	75.8	8	**1084**	**78.3**	1086	78.2	1084	78.3
465.tonto	8	701	112	**701**	**112**	702	112	8	657	120	662	119	**658**	**120**
470.lbm	8	1380	79.7	1380	79.6	**1380**	**79.6**	8	1337	82.2	**1337**	**82.2**	1337	82.2
481.wrf	8	**643**	**139**	642	139	643	139	8	**643**	**139**	642	139	643	139
482.sphinx3	8	1363	114	1354	115	**1362**	**115**	8	1313	119	**1315**	**119**	1320	118

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

     BIOS setting:
     NUMA configuration: Enabled

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/B120a-d
(Intel Xeon E5504)

SPECfp_rate2006 =   115

SPECfp_rate_base2006 =   111

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

Test date: Aug-2009
Hardware Availability: Jun-2009
Software Availability: Feb-2009

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

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

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

SPEC CFP2006 Result

NEC Corporation

Express5800/B120a-d
(Intel Xeon E5504)

SPECfp_rate2006 = 115

SPECfp_rate_base2006 = 111

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

Test date: Aug-2009
Hardware Availability: Jun-2009
Software Availability: Feb-2009

Peak Compiler Invocation

C benchmarks (except as noted below):
    icc

    482.sphinx3: `icc -m32`

C++ benchmarks (except as noted below):
    icpc

    450.soplex: `icpc -m32`

Fortran benchmarks (except as noted below):
    ifort

    437.leslie3d: `ifort -m32`

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`
      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`

Peak Optimization Flags

C benchmarks:

    433.milc: `-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`

    470.lbm: `-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch`
          `-auto-ilp32`

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/B120a-d
(Intel Xeon E5504)

SPECfp_rate2006 = 115

SPECfp_rate_base2006 = 111

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

Test date: Aug-2009
Hardware Availability: Jun-2009
Software Availability: Feb-2009

Peak Optimization Flags (Continued)

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2

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: -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 -opt-prefetch

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:

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

NEC Corporation

Express5800/B120a-d
(Intel Xeon E5504)

$SPECfp_rate2006 = $ 115

$SPECfp_rate_base2006 = $ 111

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Aug-2009

Hardware Availability: Jun-2009

Software Availability: Feb-2009

Peak Optimization Flags (Continued)

436.cactusADM: `-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 -opt-prefetch -auto-ilp32`

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-revH.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-revH.xml
http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revE.xml

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 03:00:57 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 29 September 2009.