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

NEC Corporation

Express5800/120Rh-1
(Intel Xeon processor E5420)

$SPECfp®_rate2006 = $ 68.7
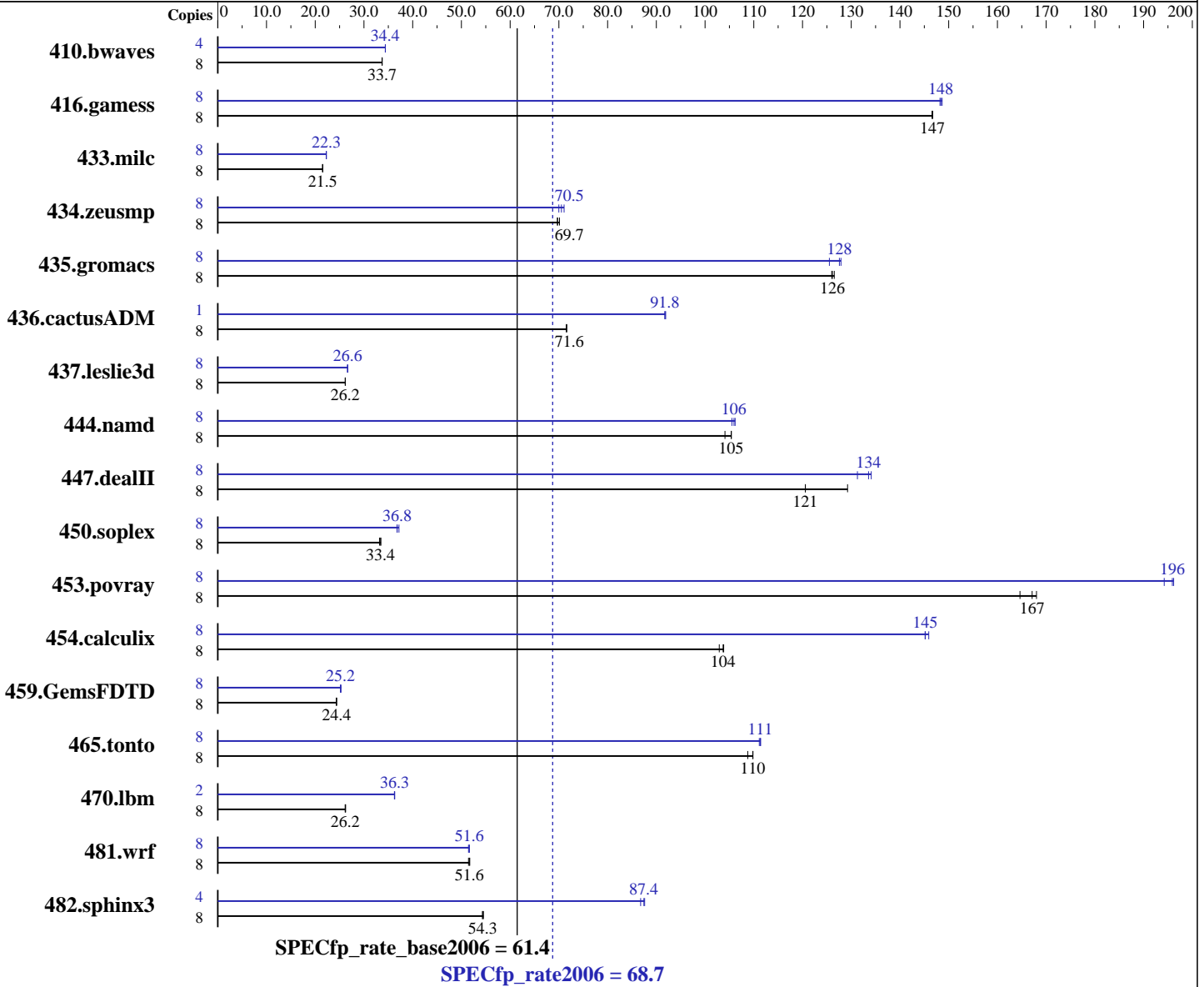
$SPECfp_rate_base2006 = $ 61.4

	Copies	
410.bwaves	4	34.4
	8	33.7
416.gamess	8	148
	8	147
433.milc	8	22.3
	8	21.5
434.zeusmp	8	70.5
	8	69.7
435.gromacs	8	128
	8	126
436.cactusADM	1	91.8
	8	71.6
437.leslie3d	8	26.6
	8	26.2
444.namd	8	106
	8	105
447.dealII	8	134
	8	121
450.soplex	8	36.8
	8	33.4
453.povray	8	196
	8	167
454.calculix	8	145
	8	104
459.GemsFDTD	8	25.2
	8	24.4
465.tonto	8	111
	8	110
470.lbm	2	36.3
	8	26.2
481.wrf	8	51.6
	8	51.6
482.sphinx3	4	87.4
	8	54.3

SPECfp_rate_base2006 = 61.4

SPECfp_rate2006 = 68.7

Hardware

CPU Name: Intel Xeon E5420

CPU Characteristics: 2.50 GHz, 2x6 MB L2 shared, 1333 MHz bus

CPU MHz: 2500

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: 12 MB I+D on chip per chip, 6 MB shared / 2 cores

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

Express5800/120Rh-1
(Intel Xeon processor E5420)

$SPECfp_rate2006 = $ 68.7

$SPECfp_rate_base2006 = $ 61.4

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

Test date: Jan-2008
Hardware Availability: Dec-2007
Software Availability: Nov-2007

L3 Cache:	None
Other Cache:	None
Memory:	12 GB (12x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem:	1x73.2 GB SAS, 15000RPM
Other Hardware:	None

System State:	Multiuser, Runlevel 3
Base Pointers:	64-bit
Peak Pointers:	32/64-bit
Other Software:	binutils-2.17.tar.gz, Version 2.17

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	3226	33.7	3222	33.7	**3225**	**33.7**	4	1580	34.4	1581	34.4	**1581**	**34.4**
416.gamess	8	1069	147	**1068**	**147**	1068	147	8	1054	149	**1055**	**148**	1057	148
433.milc	8	3415	21.5	**3410**	**21.5**	3409	21.5	8	3300	22.3	**3298**	**22.3**	3296	22.3
434.zeusmp	8	1045	69.7	1038	70.1	**1044**	**69.7**	8	1040	70.0	**1032**	**70.5**	1024	71.1
435.gromacs	8	453	126	**453**	**126**	451	127	8	447	128	**448**	**128**	455	126
436.cactusADM	8	1335	71.6	1336	71.6	**1336**	**71.6**	1	130	91.9	130	91.8	**130**	**91.8**
437.leslie3d	8	2873	26.2	2874	26.2	**2874**	**26.2**	8	**2822**	**26.6**	2822	26.6	2823	26.6
444.namd	8	609	105	616	104	**609**	**105**	8	604	106	**606**	**106**	608	106
447.dealII	8	**759**	**121**	708	129	759	121	8	**685**	**134**	682	134	697	131
450.soplex	8	2010	33.2	**1997**	**33.4**	1994	33.5	8	1814	36.8	**1812**	**36.8**	1794	37.2
453.povray	8	253	168	259	165	**255**	**167**	8	**217**	**196**	219	194	217	196
454.calculix	8	636	104	**636**	**104**	641	103	8	**454**	**145**	455	145	452	146
459.GemsFDTD	8	**3484**	**24.4**	3489	24.3	3481	24.4	8	3371	25.2	**3371**	**25.2**	3356	25.3
465.tonto	8	717	110	724	109	**717**	**110**	8	**707**	**111**	708	111	707	111
470.lbm	8	4204	26.1	**4199**	**26.2**	4189	26.2	2	757	36.3	758	36.2	**757**	**36.3**
481.wrf	8	1737	51.5	1728	51.7	**1731**	**51.6**	8	**1731**	**51.6**	1737	51.5	1731	51.6
482.sphinx3	8	2860	54.5	**2869**	**54.3**	2869	54.3	4	898	86.8	**892**	**87.4**	890	87.6

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
OMP_NUM_THREADS set to number of cores (default).
```

Platform Notes

```
Bios settings:
Intel SpeedStep Technology: Disabled
```

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/120Rh-1
(Intel Xeon processor E5420)

SPECfp_rate2006 =　68.7

SPECfp_rate_base2006 =　61.4

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Jan-2008

Hardware Availability: Dec-2007

Software Availability: Nov-2007

General Notes

```
All benchmarks compiled in 64-bit mode except 437.leslie3d,
450.soplex, 470.lbm and 482.sphinx3, for peak, are
compiled in 32-bit mode
The NEC Express5800/120Rh-1(Intel Xeon Processor E5420),
the NEC Express5800/120Rj-2(Intel Xeon Processor E5420),
the Bull NovaScale R440 E1 (Intel Xeon E5420,2.50GHz) and
the Bull NovaScale R460 E1 (Intel Xeon E5420,2.50GHz) models are electronically equivalent.
The results have been measured on a NEC Express5800/120Rj-2(Intel Xeon Processor E5420) 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
```

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/120Rh-1
(Intel Xeon processor E5420)

$SPECfp\_rate2006 = \qquad 68.7$

$SPECfp\_rate\_base2006 = \quad 61.4$

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

Test date: Jan-2008
Hardware Availability: Dec-2007
Software Availability: Nov-2007

Base Optimization Flags

C benchmarks:
    -fast

C++ benchmarks:
    -fast

Fortran benchmarks:
    -fast

Benchmarks using both Fortran and C:
    -fast

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 (except as noted below):
    ifort

    437.leslie3d: /opt/intel/fc/10.1.008/bin/ifort -L/opt/intel/fc/10.1.008/lib
                  -I/opt/intel/fc/10.1.008/include

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

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/120Rh-1
(Intel Xeon processor E5420)

SPECfp_rate2006 =   68.7

SPECfp_rate_base2006 = 61.4

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

Test date: Jan-2008
Hardware Availability: Dec-2007
Software Availability: Nov-2007

Peak Portability Flags (Continued)

```
   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-rep- -prefetch -opt-malloc-options=3

  482.sphinx3: -fast -unroll2
```

C++ benchmarks:

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

   447.dealII: -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

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

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

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/120Rh-1
(Intel Xeon processor E5420)

$SPECfp\_rate2006 = \qquad 68.7$

$SPECfp\_rate\_base2006 = \quad 61.4$

CPU2006 license: 9006		**Test date:**	Jan-2008
Test sponsor: NEC Corporation		**Hardware Availability:**	Dec-2007
Tested by: NEC Corporation		**Software Availability:**	Nov-2007

Peak Optimization Flags (Continued)

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 -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.20090714.01.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.20090714.01.xml

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 16:24:42 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 6 February 2008.