SPEC® CFP2006 Result

NEC Corporation

Express5800/120Bb-m6
(Intel Xeon processor X5355)

$SPECfp®\_rate2006 =$ 58.2

$SPECfp\_rate\_base2006 =$ 56.3
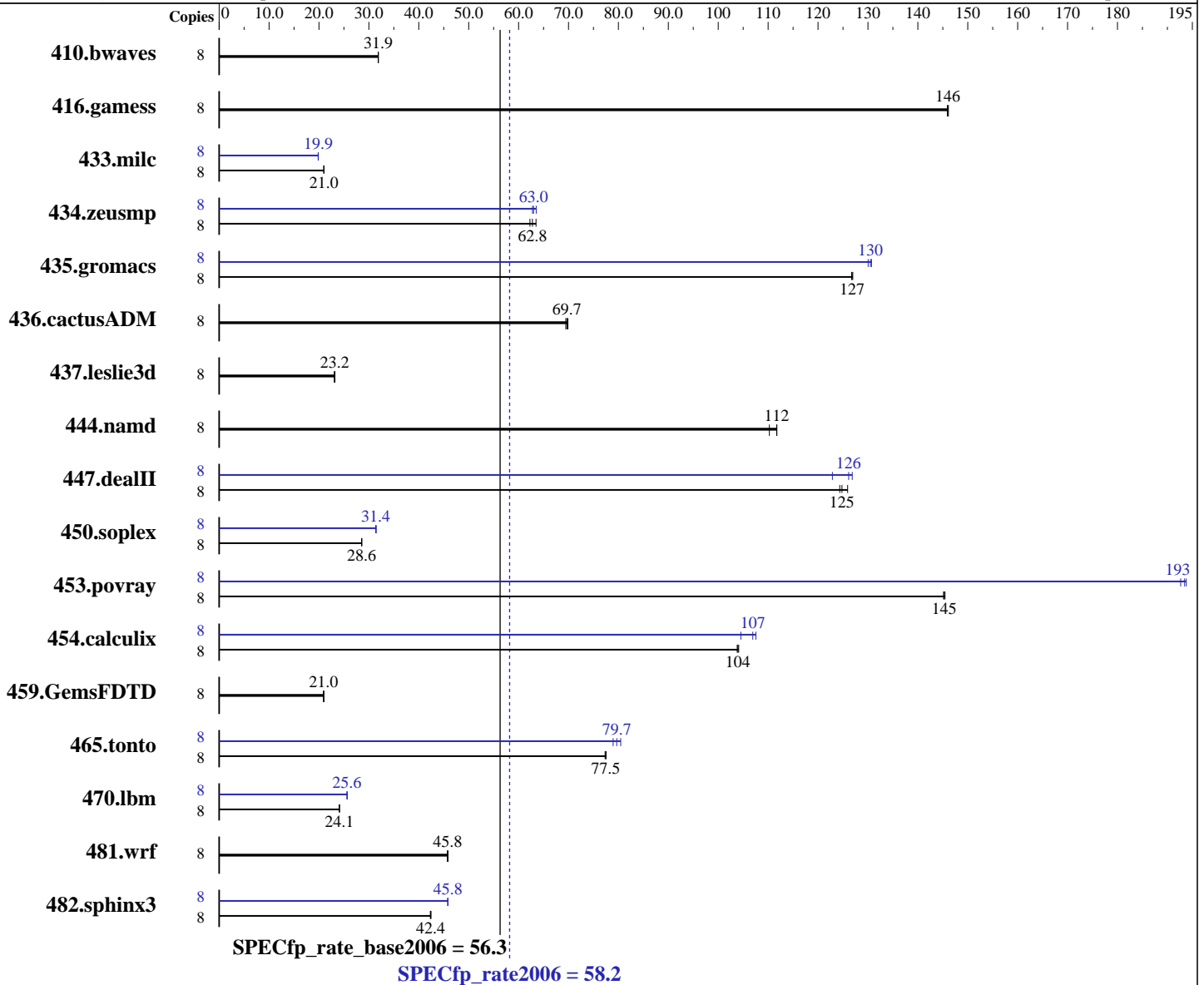
CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Nov-2007

Hardware Availability: Jan-2007

Software Availability: Apr-2007

SPECfp_rate_base2006 = 56.3

SPECfp_rate2006 = 58.2

Hardware

CPU Name:	Intel Xeon X5355
CPU Characteristics:	2.66 GHz, 2x4 MB L2 shared, 1333 MHz bus
CPU MHz:	2666
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:	8 MB I+D on chip per chip, 4 MB shared / 2 cores

Continued on next page

Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64), Kernel 2.6.16.21-0.8-smp
Compiler:	Intel C++ Compiler for Linux32 and Linux64 version 9.1 Build 20070320 Package ID: l_cc_c_9.1.049 Intel Fortran Compiler for Linux32 and Linux64 version 9.1 Build 20070320 Package ID: l_fc_c_9.1.045
Auto Parallel:	No

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/120Bb-m6
(Intel Xeon processor X5355)

$SPECfp\_rate2006 =$ 58.2

$SPECfp\_rate\_base2006 =$ 56.3

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

L3 Cache:	None	File System:	ext2
Other Cache:	None	System State:	Multiuser, Runlevel 3
Memory:	16 GB (8x2 GB PC2-5300F, 2 rank, CL5-5-5, ECC)	Base Pointers:	64-bit
Disk Subsystem:	1x73.2 GB SAS, 10000RPM	Peak Pointers:	32/64-bit
Other Hardware:	None	Other Software:	None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	3411	31.9	**3411**	**31.9**	3408	31.9	8	3411	31.9	**3411**	**31.9**	3408	31.9
416.gamess	8	1074	146	1072	146	**1073**	**146**	8	1074	146	1072	146	**1073**	**146**
433.milc	8	3501	21.0	3498	21.0	**3500**	**21.0**	8	3694	19.9	**3698**	**19.9**	3702	19.8
434.zeusmp	8	1147	63.5	1169	62.3	**1160**	**62.8**	8	**1155**	**63.0**	1160	62.8	1146	63.5
435.gromacs	8	450	127	451	127	**450**	**127**	8	437	131	**438**	**130**	439	130
436.cactusADM	8	**1372**	**69.7**	1376	69.5	1368	69.9	8	**1372**	**69.7**	1376	69.5	1368	69.9
437.leslie3d	8	3241	23.2	**3245**	**23.2**	3261	23.1	8	3241	23.2	**3245**	**23.2**	3261	23.1
444.namd	8	574	112	582	110	**574**	**112**	8	574	112	582	110	**574**	**112**
447.dealII	8	736	124	727	126	**733**	**125**	8	**726**	**126**	721	127	745	123
450.soplex	8	**2336**	**28.6**	2337	28.6	2335	28.6	8	2127	31.4	**2124**	**31.4**	2120	31.5
453.povray	8	**293**	**145**	293	145	293	145	8	220	194	**220**	**193**	221	193
454.calculix	8	636	104	634	104	**635**	**104**	8	**617**	**107**	614	108	631	105
459.GemsFDTD	8	4044	21.0	4062	20.9	**4050**	**21.0**	8	4044	21.0	4062	20.9	**4050**	**21.0**
465.tonto	8	1015	77.5	1018	77.3	**1016**	**77.5**	8	997	78.9	978	80.5	**988**	**79.7**
470.lbm	8	**4561**	**24.1**	4560	24.1	4566	24.1	8	**4288**	**25.6**	4288	25.6	4287	25.6
481.wrf	8	**1952**	**45.8**	1948	45.9	1954	45.7	8	**1952**	**45.8**	1948	45.9	1954	45.7
482.sphinx3	8	3685	42.3	3674	42.4	**3677**	**42.4**	8	3400	45.9	3406	45.8	**3401**	**45.8**

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.

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/120Bb-m6
(Intel Xeon processor X5355)

$SPECfp\_rate2006 = 58.2$

$SPECfp\_rate\_base2006 = 56.3$

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

Test date: Nov-2007
Hardware Availability: Jan-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

Express5800/120Bb-m6
(Intel Xeon processor X5355)

$SPECfp_rate2006 = $ 58.2

$SPECfp_rate_base2006 = $ 56.3

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

Test date: Nov-2007
Hardware Availability: Jan-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:

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/120Bb-m6
(Intel Xeon processor X5355)

$SPECfp\_rate2006 = \qquad 58.2$

$SPECfp\_rate\_base2006 = 56.3$

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

Test date: Nov-2007
Hardware Availability: Jan-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-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

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 15:18:43 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 8 January 2008.