SPEC® CFP2006 Result

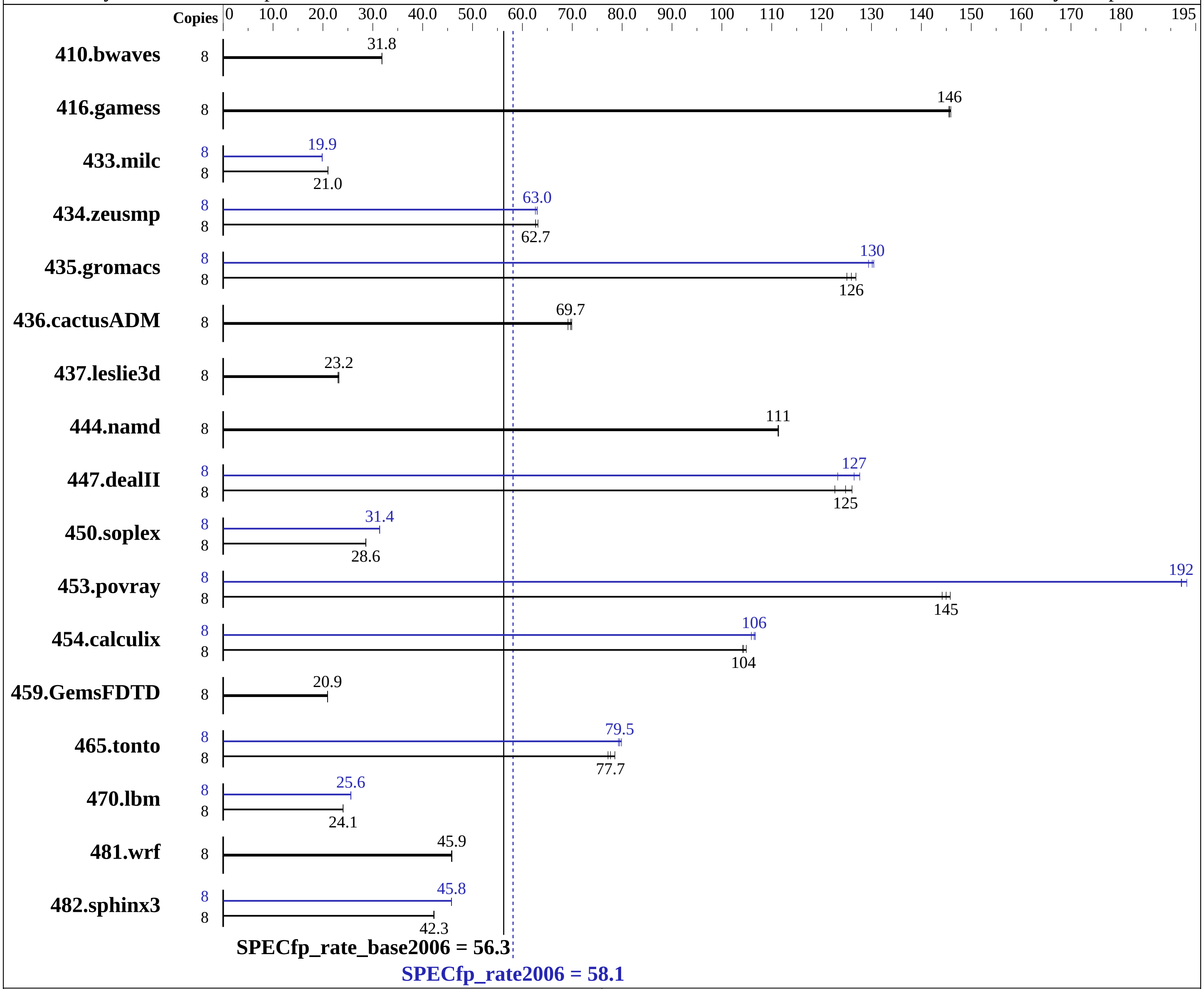
NEC Corporation

Express5800/120Rg-1
(Intel Xeon processor X5355)

SPECfp®_rate2006 = 58.1

SPECfp_rate_base2006 = 56.3

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



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

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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:	ext2

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L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2 GB DDR2 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: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	3416	31.8	3414	31.8	**3416**	**31.8**	8	3416	31.8	3414	31.8	**3416**	**31.8**
416.gamess	8	**1076**	**146**	1074	146	1076	146	8	**1076**	**146**	1074	146	1076	146
433.milc	8	**3498**	**21.0**	3494	21.0	3498	21.0	8	3695	19.9	3697	19.9	**3696**	**19.9**
434.zeusmp	8	1153	63.1	**1162**	**62.7**	1162	62.7	8	1163	62.6	1156	63.0	**1156**	**63.0**
435.gromacs	8	457	125	450	127	**453**	**126**	8	438	130	441	129	**439**	**130**
436.cactusADM	8	1383	69.1	1368	69.9	**1372**	**69.7**	8	1383	69.1	1368	69.9	**1372**	**69.7**
437.leslie3d	8	**3241**	**23.2**	3269	23.0	3240	23.2	8	**3241**	**23.2**	3269	23.0	3240	23.2
444.namd	8	577	111	**577**	**111**	576	111	8	577	111	**577**	**111**	576	111
447.dealII	8	746	123	**733**	**125**	726	126	8	**723**	**127**	717	128	743	123
450.soplex	8	2330	28.6	**2333**	**28.6**	2334	28.6	8	2127	31.4	2124	31.4	**2126**	**31.4**
453.povray	8	292	146	295	144	**294**	**145**	8	220	193	**221**	**192**	222	192
454.calculix	8	629	105	**632**	**104**	634	104	8	623	106	**620**	**106**	619	107
459.GemsFDTD	8	4058	20.9	**4057**	**20.9**	4054	20.9	8	4058	20.9	**4057**	**20.9**	4054	20.9
465.tonto	8	1020	77.2	**1014**	**77.7**	1002	78.5	8	986	79.9	993	79.3	**990**	**79.5**
470.lbm	8	**4569**	**24.1**	4570	24.1	4567	24.1	8	4293	25.6	4297	25.6	**4293**	**25.6**
481.wrf	8	1952	45.8	**1949**	**45.9**	1948	45.9	8	1952	45.8	**1949**	**45.9**	1948	45.9
482.sphinx3	8	3685	42.3	3694	42.2	**3687**	**42.3**	8	3404	45.8	**3405**	**45.8**	3407	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.

The Express5800/120Rg-1 and the Express5800/120Ri-2 models are
electronically equivalent.
The results have been measured on a Express5800/120Ri-2 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:
`-fast`

C++ benchmarks:
`-fast`

Fortran benchmarks:
`-fast`

Benchmarks using both Fortran and C:
`-fast`

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

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

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 13:01:44 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 10 July 2007.