SPEC® CFP2006 Result

NEC Corporation

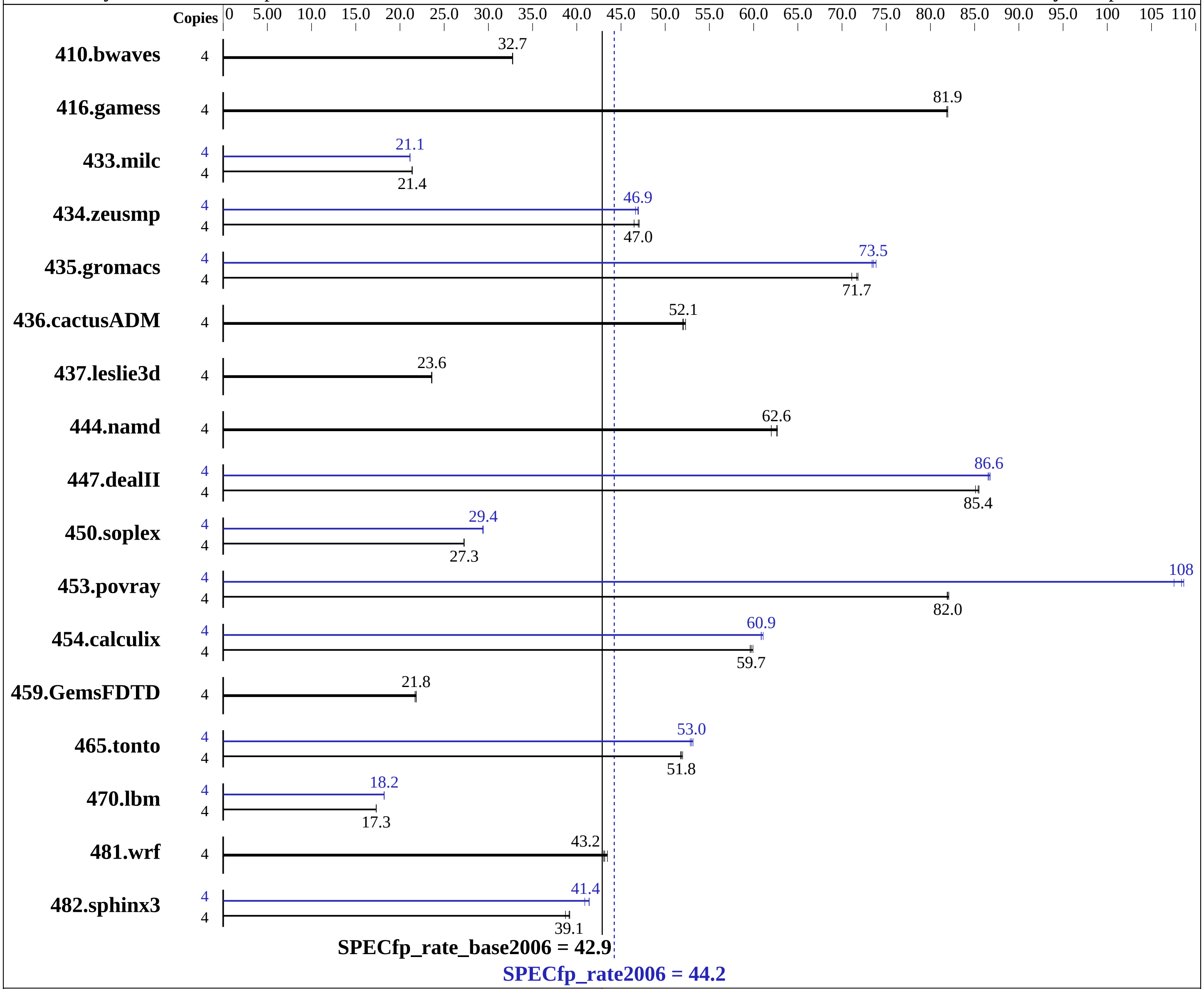
Express5800/120Ri-2
(Intel Xeon processor 5160)

SPECfp®_rate2006 = 44.2

SPECfp_rate_base2006 = 42.9

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

Test date: May-2007
Hardware Availability: May-2007
Software Availability: Apr-2007



Hardware

CPU Name:	Intel Xeon 5160
CPU Characteristics:	3.00 GHz, 4MB L2, 1333MHz bus
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip

Continued on next page

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:	ReiserFS

Continued on next page

L3 Cache:	None
Other Cache:	None
Memory:	8 GB (4x2 GB DDR2 5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem:	1x146.5 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	4	**1661**	**32.7**	1659	32.8	1662	32.7	4	**1661**	**32.7**	1659	32.8	1662	32.7
416.gamess	4	956	82.0	**956**	**81.9**	957	81.8	4	956	82.0	**956**	**81.9**	957	81.8
433.milc	4	1716	21.4	1720	21.4	**1717**	**21.4**	4	1736	21.1	1738	21.1	**1737**	**21.1**
434.zeusmp	4	**775**	**47.0**	773	47.1	783	46.5	4	**776**	**46.9**	775	47.0	780	46.6
435.gromacs	4	**399**	**71.7**	402	71.1	398	71.8	4	**388**	**73.5**	389	73.4	387	73.9
436.cactusADM	4	914	52.3	919	52.0	**918**	**52.1**	4	914	52.3	919	52.0	**918**	**52.1**
437.leslie3d	4	1592	23.6	**1593**	**23.6**	1596	23.6	4	1592	23.6	**1593**	**23.6**	1596	23.6
444.namd	4	**513**	**62.6**	512	62.7	517	62.0	4	**513**	**62.6**	512	62.7	517	62.0
447.dealII	4	538	85.1	**536**	**85.4**	535	85.5	4	529	86.5	**528**	**86.6**	527	86.8
450.soplex	4	1225	27.2	1223	27.3	**1224**	**27.3**	4	1137	29.4	**1134**	**29.4**	1134	29.4
453.povray	4	**260**	**82.0**	259	82.1	260	81.9	4	198	108	196	109	**196**	**108**
454.calculix	4	**552**	**59.7**	554	59.6	551	59.9	4	540	61.1	**542**	**60.9**	542	60.9
459.GemsFDTD	4	1956	21.7	1944	21.8	**1944**	**21.8**	4	1956	21.7	1944	21.8	**1944**	**21.8**
465.tonto	4	757	52.0	**759**	**51.8**	761	51.7	4	**743**	**53.0**	745	52.8	741	53.1
470.lbm	4	3176	17.3	**3175**	**17.3**	3175	17.3	4	3017	18.2	**3017**	**18.2**	3018	18.2
481.wrf	4	**1035**	**43.2**	1028	43.5	1038	43.0	4	**1035**	**43.2**	1028	43.5	1038	43.0
482.sphinx3	4	2013	38.7	**1992**	**39.1**	1988	39.2	4	1906	40.9	1883	41.4	**1884**	**41.4**

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.

NEC Corporation

Express5800/120Ri-2
(Intel Xeon processor 5160)

SPECfp_rate2006 = 44.2

SPECfp_rate_base2006 = 42.9

CPU2006 license:	9006	**Test date:**	May-2007
Test sponsor:	NEC Corporation	**Hardware Availability:**	May-2007
Tested by:	NEC Corporation	**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`

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 13:01:22 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 10 July 2007.