SPEC® CFP2006 Result

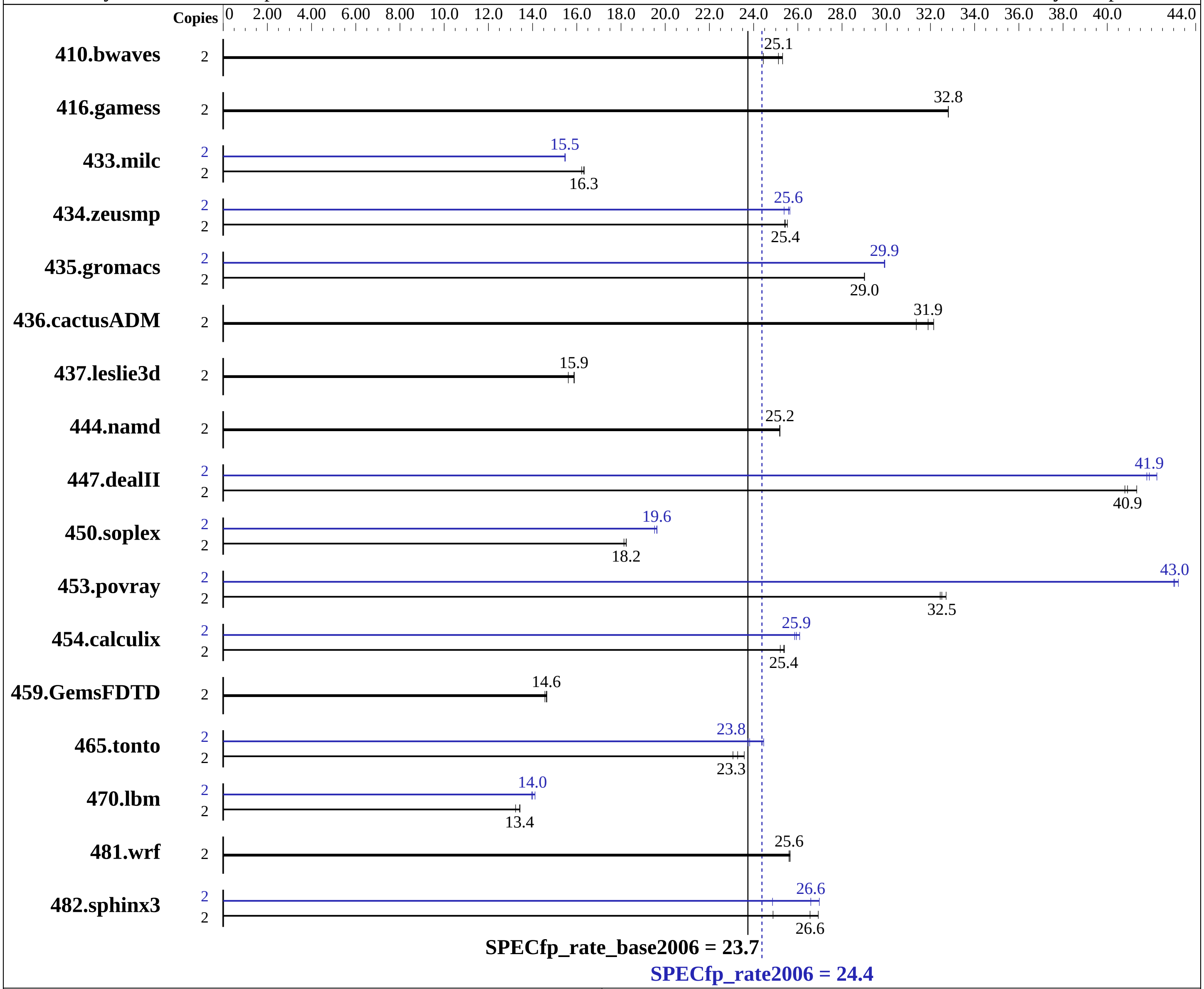
NEC Corporation

Express5800/110Rh-1
(Intel Xeon processor 3060)

SPECfp®_rate2006 = 24.4

SPECfp_rate_base2006 = 23.7

CPU2006 license:	9006	**Test date:**	Nov-2007
Test sponsor:	NEC Corporation	**Hardware Availability:**	Nov-2006
Tested by:	NEC Corporation	**Software Availability:**	Apr-2007



Hardware

CPU Name:	Intel Xeon 3060
CPU Characteristics:	2.40 GHz, 4 MB L2, 1066 MHz bus
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip

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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

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L3 Cache:	None
Other Cache:	None
Memory:	4 GB (4x1 GB PC2-5300E, 2 rank, CL5-5-5, ECC)
Disk Subsystem:	1x80 GB SATAII, 7200RPM
Other Hardware:	None
File System:	ext2
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	2	1112	24.4	**1082**	**25.1**	1074	25.3	2	1112	24.4	**1082**	**25.1**	1074	25.3
416.gamess	2	**1194**	**32.8**	1194	32.8	1194	32.8	2	**1194**	**32.8**	1194	32.8	1194	32.8
433.milc	2	1132	16.2	**1125**	**16.3**	1124	16.3	2	1186	15.5	1188	15.5	**1188**	**15.5**
434.zeusmp	2	**715**	**25.4**	716	25.4	713	25.5	2	710	25.6	717	25.4	**712**	**25.6**
435.gromacs	2	492	29.0	492	29.0	**492**	**29.0**	2	477	29.9	477	29.9	**477**	**29.9**
436.cactusADM	2	762	31.4	**749**	**31.9**	743	32.1	2	762	31.4	**749**	**31.9**	743	32.1
437.leslie3d	2	1204	15.6	**1185**	**15.9**	1183	15.9	2	1204	15.6	**1185**	**15.9**	1183	15.9
444.namd	2	637	25.2	**637**	**25.2**	637	25.2	2	637	25.2	**637**	**25.2**	637	25.2
447.dealII	2	**559**	**40.9**	561	40.8	554	41.3	2	**546**	**41.9**	547	41.8	542	42.2
450.soplex	2	920	18.1	914	18.2	**915**	**18.2**	2	**850**	**19.6**	855	19.5	850	19.6
453.povray	2	325	32.7	328	32.4	**327**	**32.5**	2	**247**	**43.0**	246	43.2	247	43.0
454.calculix	2	655	25.2	**651**	**25.4**	650	25.4	2	633	26.1	638	25.9	**636**	**25.9**
459.GemsFDTD	2	1458	14.6	1449	14.6	**1451**	**14.6**	2	1458	14.6	1449	14.6	**1451**	**14.6**
465.tonto	2	853	23.1	835	23.6	**845**	**23.3**	2	829	23.7	**826**	**23.8**	805	24.5
470.lbm	2	2077	13.2	2046	13.4	**2049**	**13.4**	2	**1963**	**14.0**	1968	14.0	1948	14.1
481.wrf	2	**872**	**25.6**	872	25.6	871	25.7	2	**872**	**25.6**	872	25.6	871	25.7
482.sphinx3	2	1567	24.9	1448	26.9	**1468**	**26.6**	2	**1466**	**26.6**	1568	24.9	1445	27.0

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 1066 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.
```

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-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.
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