



SPEC® CFP2006 Result

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NEC Corporation

Express5800/120Bb-6
(Intel Xeon processor E5345)

SPECfp®_rate2006 = 51.9

SPECfp_rate_base2006 = 50.1

CPU2006 license: 9006

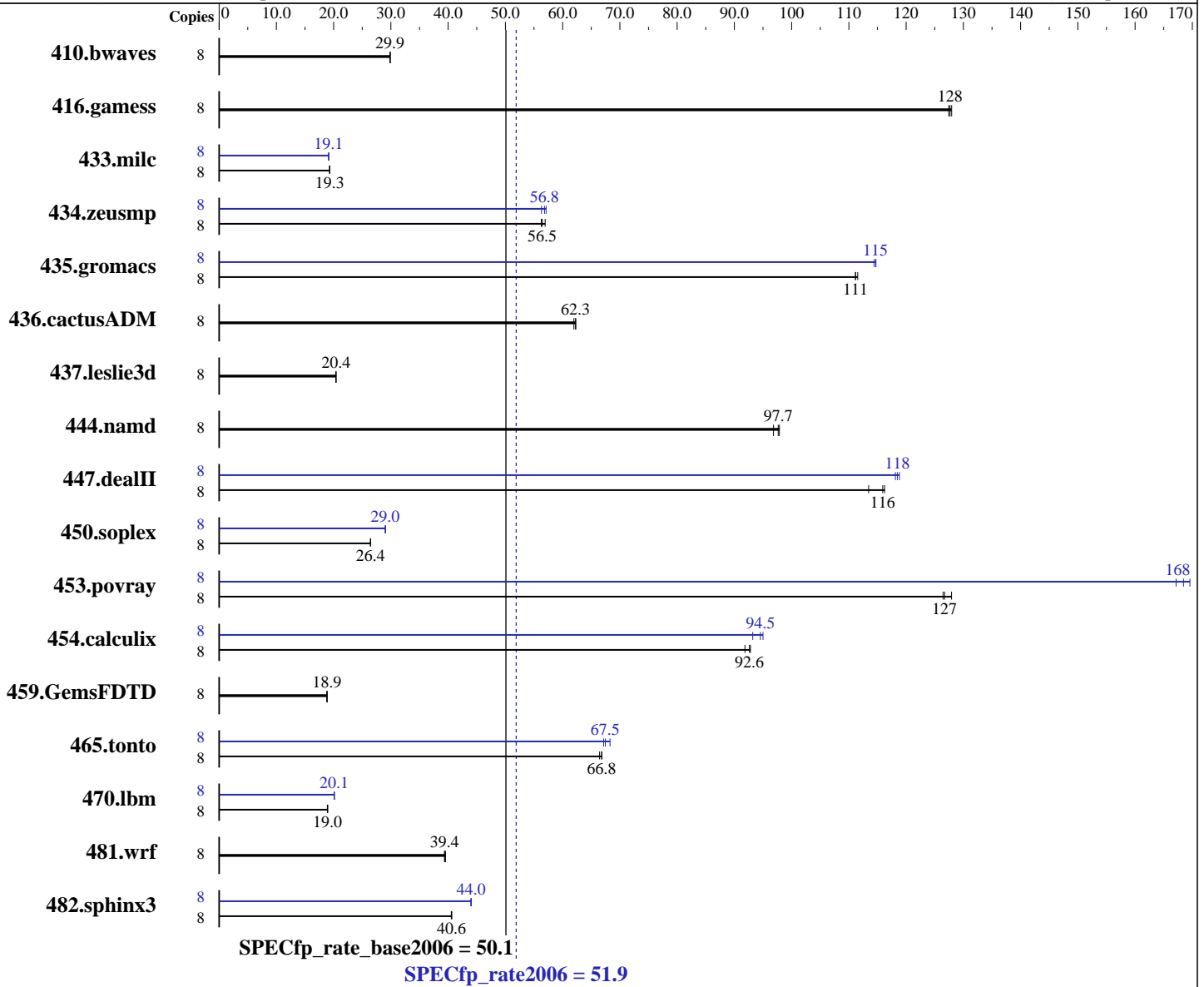
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Oct-2007

Hardware Availability: Jan-2007

Software Availability: Apr-2007



Hardware

CPU Name: Intel Xeon E5345
 CPU Characteristics: 2.33 GHz, 2x4 MB L2 shared, 1333 MHz bus
 CPU MHz: 2333
 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 for 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 (4x4 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: 1x146.5 GB SAS, 10000RPM
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	3641	29.9	3638	29.9	3642	29.9	8	3641	29.9	3638	29.9	3642	29.9
416.gamess	8	1224	128	1227	128	1229	127	8	1224	128	1227	128	1229	127
433.milc	8	3804	19.3	3803	19.3	3807	19.3	8	3838	19.1	3840	19.1	3840	19.1
434.zeusmp	8	1294	56.3	1289	56.5	1278	56.9	8	1275	57.1	1281	56.8	1293	56.3
435.gromacs	8	514	111	514	111	512	112	8	498	115	499	114	498	115
436.cactusADM	8	1535	62.3	1543	62.0	1535	62.3	8	1535	62.3	1543	62.0	1535	62.3
437.leslie3d	8	3682	20.4	3689	20.4	3683	20.4	8	3682	20.4	3689	20.4	3683	20.4
444.namd	8	663	96.8	657	97.7	656	97.9	8	663	96.8	657	97.7	656	97.9
447.dealII	8	787	116	807	113	790	116	8	770	119	775	118	773	118
450.soplex	8	2526	26.4	2520	26.5	2523	26.4	8	2298	29.0	2298	29.0	2298	29.0
453.povray	8	337	126	333	128	336	127	8	255	167	253	168	251	170
454.calculix	8	719	91.9	711	92.8	712	92.6	8	708	93.2	695	95.0	698	94.5
459.GemsFDTD	8	4513	18.8	4503	18.9	4500	18.9	8	4513	18.8	4503	18.9	4500	18.9
465.tonto	8	1184	66.5	1178	66.8	1178	66.8	8	1153	68.3	1167	67.5	1172	67.2
470.lbm	8	5816	18.9	5800	19.0	5797	19.0	8	5464	20.1	5465	20.1	5466	20.1
481.wrf	8	2269	39.4	2269	39.4	2260	39.5	8	2269	39.4	2269	39.4	2260	39.5
482.sphinx3	8	3845	40.5	3838	40.6	3840	40.6	8	3542	44.0	3539	44.1	3547	44.0

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 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.



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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



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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.deallI: -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:

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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>

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For other inquiries, please contact webmaster@spec.org.

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