



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/120Bb-6
(Intel Xeon processor 5130)

SPECfp®_rate2006 = 36.2

SPECfp_rate_base2006 = 35.1

CPU2006 license: 9006

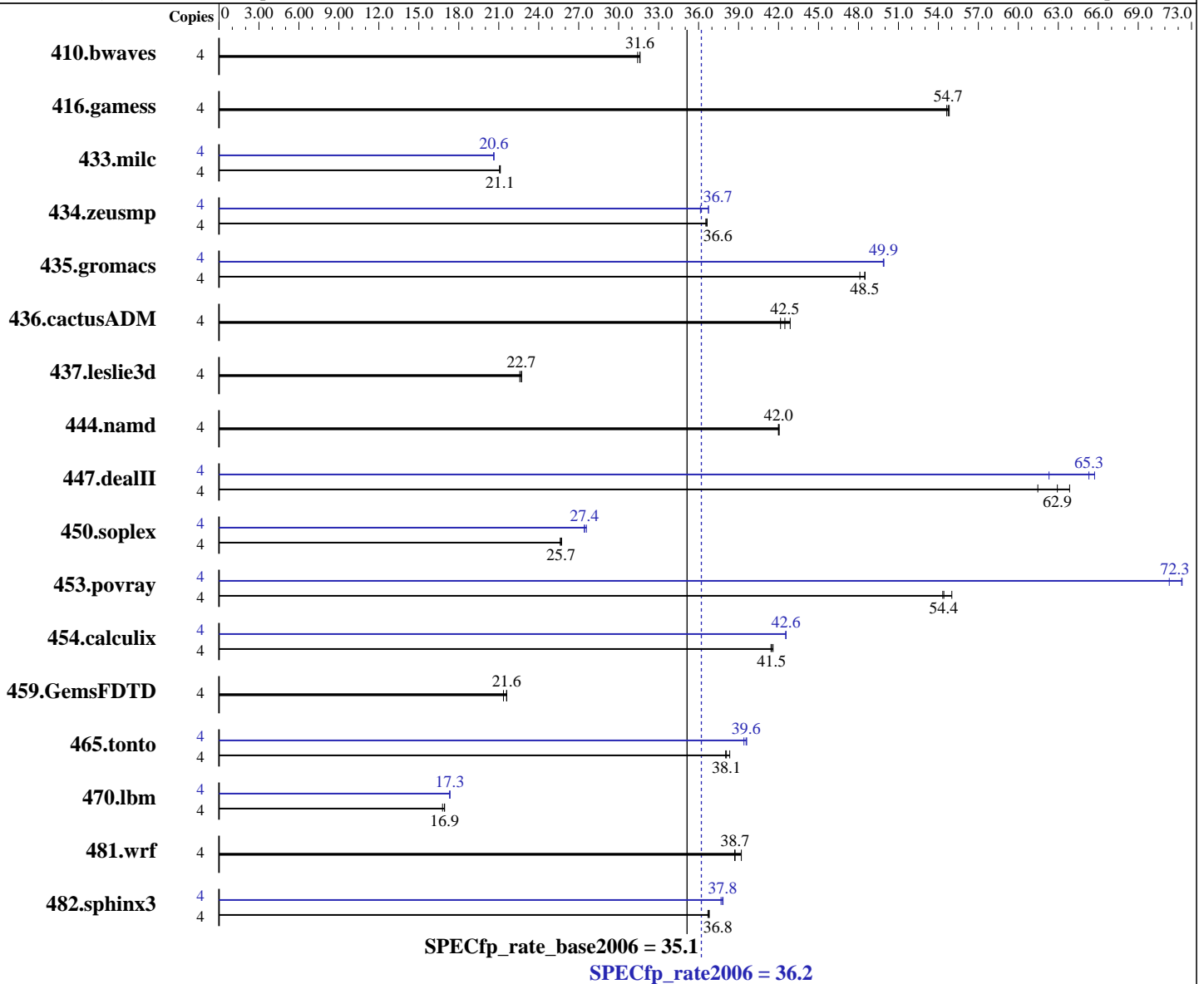
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Oct-2007

Hardware Availability: May-2007

Software Availability: Apr-2007



Hardware

CPU Name: Intel Xeon 5130
 CPU Characteristics: 2.00 GHz, 4MB L2, 1333MHz bus
 CPU MHz: 2000
 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

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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: 8 GB (4x2 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	4	1720	31.6	1730	31.4	<u>1721</u>	<u>31.6</u>	4	1720	31.6	1730	31.4	<u>1721</u>	<u>31.6</u>
416.gamess	4	1434	54.6	1429	54.8	<u>1431</u>	<u>54.7</u>	4	1434	54.6	1429	54.8	<u>1431</u>	<u>54.7</u>
433.milc	4	<u>1741</u>	<u>21.1</u>	1739	21.1	1744	21.1	4	<u>1780</u>	<u>20.6</u>	1779	20.6	1781	20.6
434.zeusmp	4	<u>994</u>	<u>36.6</u>	996	36.5	993	36.6	4	<u>991</u>	<u>36.7</u>	1007	36.1	991	36.7
435.gromacs	4	<u>589</u>	<u>48.5</u>	594	48.1	589	48.5	4	573	49.9	<u>573</u>	<u>49.9</u>	572	49.9
436.cactusADM	4	1134	42.1	1115	42.9	<u>1125</u>	<u>42.5</u>	4	1134	42.1	1115	42.9	<u>1125</u>	<u>42.5</u>
437.leslie3d	4	1655	22.7	1666	22.6	<u>1657</u>	<u>22.7</u>	4	1655	22.7	1666	22.6	<u>1657</u>	<u>22.7</u>
444.namd	4	763	42.1	<u>764</u>	<u>42.0</u>	764	42.0	4	763	42.1	<u>764</u>	<u>42.0</u>	764	42.0
447.dealII	4	<u>727</u>	<u>62.9</u>	717	63.8	745	61.5	4	<u>701</u>	<u>65.3</u>	696	65.7	734	62.3
450.soplex	4	<u>1299</u>	<u>25.7</u>	1297	25.7	1302	25.6	4	<u>1216</u>	<u>27.4</u>	1216	27.4	1210	27.6
453.povray	4	387	55.0	<u>391</u>	<u>54.4</u>	392	54.3	4	294	72.3	<u>295</u>	<u>72.3</u>	298	71.3
454.calculix	4	793	41.6	<u>795</u>	<u>41.5</u>	796	41.4	4	775	42.6	776	42.5	<u>775</u>	<u>42.6</u>
459.GemsFDTD	4	1965	21.6	<u>1966</u>	<u>21.6</u>	1987	21.4	4	1965	21.6	<u>1966</u>	<u>21.6</u>	1987	21.4
465.tonto	4	1027	38.3	<u>1033</u>	<u>38.1</u>	1035	38.0	4	<u>995</u>	<u>39.6</u>	994	39.6	999	39.4
470.lbm	4	<u>3247</u>	<u>16.9</u>	3246	16.9	3275	16.8	4	<u>3172</u>	<u>17.3</u>	3174	17.3	3171	17.3
481.wrf	4	1154	38.7	1140	39.2	<u>1153</u>	<u>38.7</u>	4	1154	38.7	1140	39.2	<u>1153</u>	<u>38.7</u>
482.sphinx3	4	<u>2120</u>	<u>36.8</u>	2124	36.7	2118	36.8	4	2060	37.8	2069	37.7	<u>2063</u>	<u>37.8</u>

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.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:

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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-linux-flags.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/NEC-ic91-linux-flags.xml>

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

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