



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/120Bb-6
(Intel Xeon X5260)

SPECfp®_rate2006 = 28.4

SPECfp_rate_base2006 = 26.5

CPU2006 license: 9006

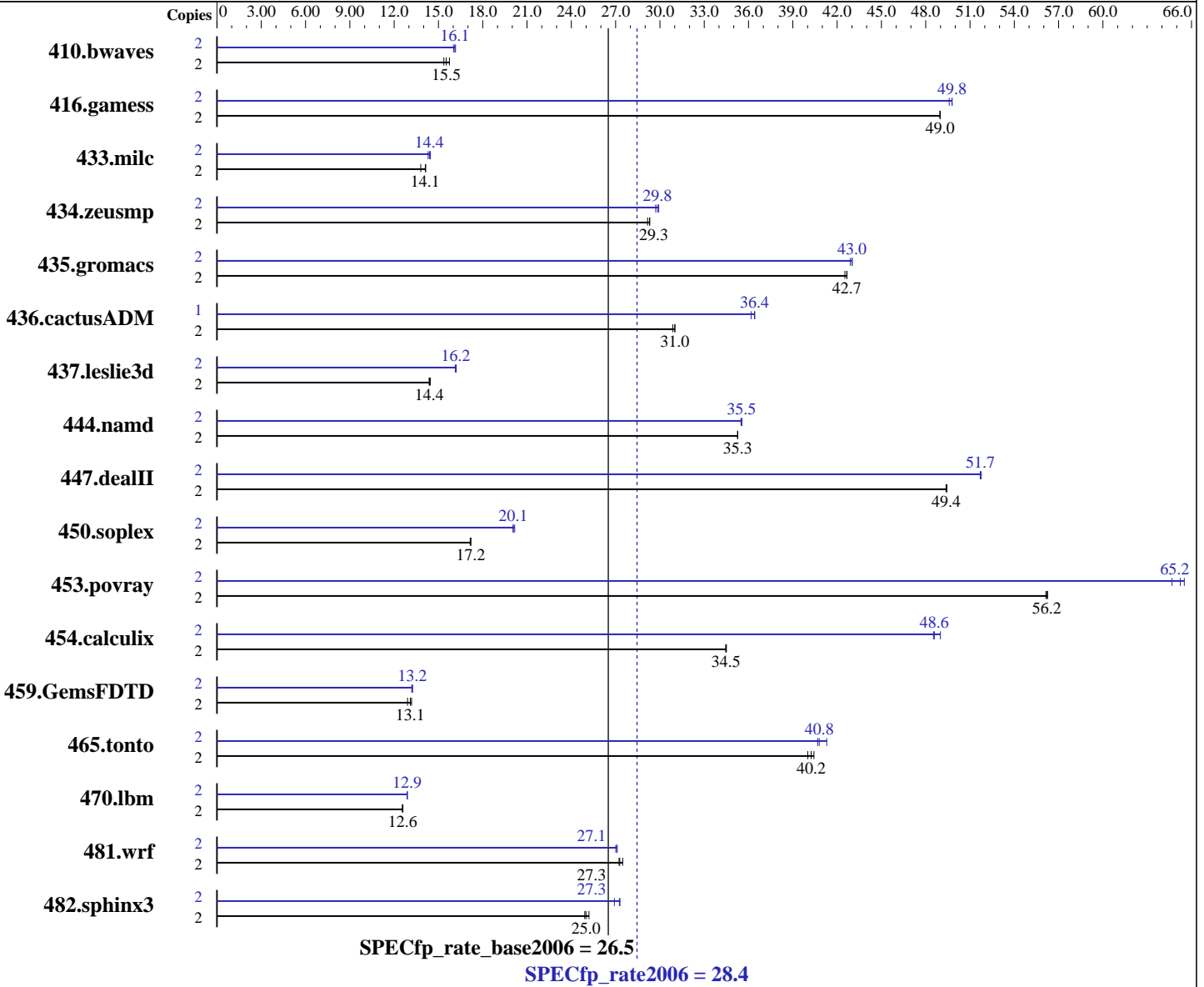
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: May-2008

Hardware Availability: Feb-2008

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon X5260
 CPU Characteristics: 3.33 GHz, 6 MB L2, 1333 MHz bus
 CPU MHz: 3333
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 6 MB I+D on chip per chip

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Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smpp
 Compiler: Intel C++ and Fortran Compiler for Linux32 and Linux64 version 10.1 Build 20070913 Package ID: l_cc_p_10.1.008, l_fc_p_10.1.008
 Auto Parallel: Yes
 File System: ReiserFS

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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: 1x73.2 GB SAS, 15000RPM
Other Hardware: None

System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: binutils-2.17.tar.gz, Version 2.17

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	2	1769	15.4	<u>1750</u>	<u>15.5</u>	1726	15.7	2	<u>1687</u>	<u>16.1</u>	1696	16.0	1682	16.2
416.gamess	2	800	49.0	799	49.0	<u>799</u>	<u>49.0</u>	2	790	49.6	<u>787</u>	<u>49.8</u>	787	49.8
433.milc	2	1330	13.8	1299	14.1	<u>1301</u>	<u>14.1</u>	2	1270	14.5	1284	14.3	<u>1276</u>	<u>14.4</u>
434.zeusmp	2	621	29.3	624	29.2	<u>621</u>	<u>29.3</u>	2	608	29.9	613	29.7	<u>610</u>	<u>29.8</u>
435.gromacs	2	<u>335</u>	<u>42.7</u>	335	42.7	336	42.5	2	332	43.0	333	42.9	<u>332</u>	<u>43.0</u>
436.cactusADM	2	771	31.0	774	30.9	<u>771</u>	<u>31.0</u>	1	<u>328</u>	<u>36.4</u>	330	36.2	328	36.4
437.leslie3d	2	1308	14.4	<u>1306</u>	<u>14.4</u>	1301	14.4	2	1160	16.2	<u>1162</u>	<u>16.2</u>	1165	16.1
444.namd	2	455	35.3	<u>455</u>	<u>35.3</u>	455	35.3	2	451	35.6	<u>452</u>	<u>35.5</u>	452	35.5
447.dealII	2	463	49.4	<u>463</u>	<u>49.4</u>	463	49.4	2	<u>442</u>	<u>51.7</u>	442	51.8	443	51.7
450.soplex	2	<u>970</u>	<u>17.2</u>	970	17.2	973	17.2	2	<u>831</u>	<u>20.1</u>	832	20.1	827	20.2
453.povray	2	190	56.1	189	56.3	<u>189</u>	<u>56.2</u>	2	162	65.5	165	64.7	<u>163</u>	<u>65.2</u>
454.calculix	2	478	34.5	479	34.5	<u>479</u>	<u>34.5</u>	2	340	48.5	337	49.0	<u>340</u>	<u>48.6</u>
459.GemsFDTD	2	1644	12.9	<u>1620</u>	<u>13.1</u>	1610	13.2	2	1608	13.2	<u>1603</u>	<u>13.2</u>	1602	13.2
465.tonto	2	487	40.4	492	40.0	<u>489</u>	<u>40.2</u>	2	477	41.3	484	40.7	<u>482</u>	<u>40.8</u>
470.lbm	2	2182	12.6	<u>2185</u>	<u>12.6</u>	2189	12.6	2	<u>2133</u>	<u>12.9</u>	2134	12.9	2131	12.9
481.wrf	2	813	27.5	<u>819</u>	<u>27.3</u>	820	27.2	2	<u>825</u>	<u>27.1</u>	824	27.1	827	27.0
482.sphinx3	2	<u>1560</u>	<u>25.0</u>	1547	25.2	1565	24.9	2	1448	26.9	1428	27.3	<u>1430</u>	<u>27.3</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
except for 436.cactusADM at peak.
OMP_NUM_THREADS set to number of cores

General Notes

All benchmarks compiled in 64-bit mode except 437.leslie3d, 450.soplex, 470.lbm and 482.sphinx3, for peak, are compiled in 32-bit mode



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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 (except as noted below):

```
/opt/intel/cc/10.1.008/bin/icc -L/opt/intel/cc/10.1.008/lib  
-I/opt/intel/cc/10.1.008/include
```

433.milc: icc

C++ benchmarks (except as noted below):

icpc

```
450.soplex: /opt/intel/cc/10.1.008/bin/icpc -L/opt/intel/cc/10.1.008/lib  
-I/opt/intel/cc/10.1.008/include
```

Fortran benchmarks (except as noted below):

ifort

```
437.leslie3d: /opt/intel/fc/10.1.008/bin/ifort -L/opt/intel/fc/10.1.008/lib  
-I/opt/intel/fc/10.1.008/include
```

Benchmarks using both Fortran and C:

icc ifort

Peak 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  
444.namd: -DSPEC_CPU_LP64  
447.deall: -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 -fno-alias  
-auto-ilp32
```

```
470.lbm: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-scalar-rep- -prefetch -opt-malloc-options=3
```

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Peak Optimization Flags (Continued)

482.sphinx3: -fast -unroll2

C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias
-auto-ilp32

447.dealIII: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-ansi-alias -scalar-rep-

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -fast
-opt-malloc-options=3

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4
-ansi-alias

Fortran benchmarks:

410.bwaves: -fast -prefetch

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0
-ansi-alias -scalar-rep-

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -fast

437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-opt-malloc-options=3

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0
-prefetch

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto

Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-auto-ilp32

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-prefetch -parallel -auto-ilp32

454.calculix: -fast -unroll-aggressive -auto-ilp32

481.wrf: -fast -auto-ilp32

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/NEC-Intel-ic10.1-FP-intel64-linux-flags.html>



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

<http://www.spec.org/cpu2006/flags/NEC-Intel-ic10.1-FP-intel64-linux-flags.xml>

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