



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

T120Rb-1
(Intel Xeon processor 5160)

SPECfp[®]2006 = 17.4

SPECfp_base2006 = 16.9

CPU2006 license: 9006

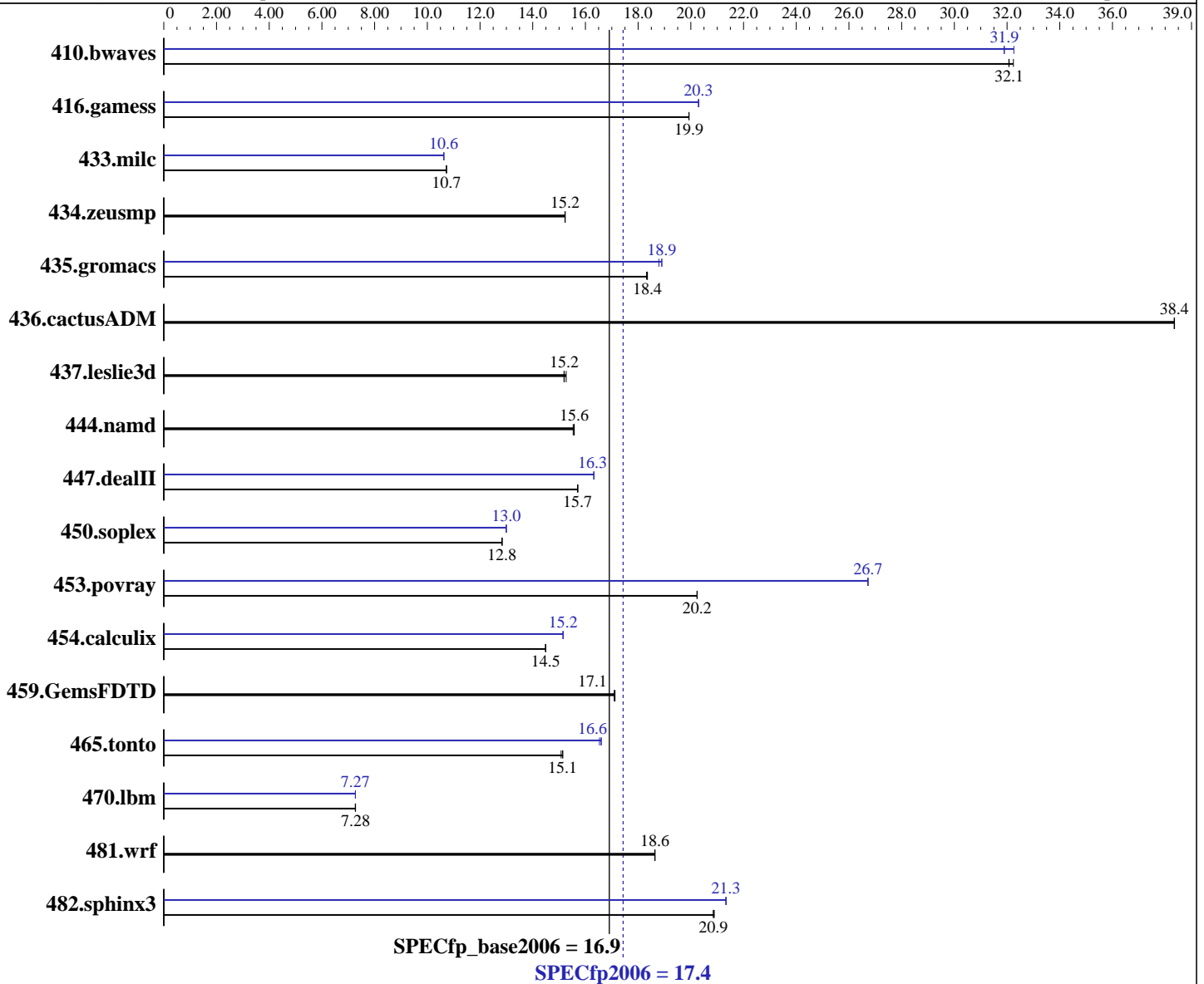
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Aug-2007

Hardware Availability: Jun-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

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Software

Operating System: Windows Server 2003, Standard x64 Edition
 Compiler: Intel C++ Compiler for EM64T version 9.1
 Build 20070322, Package-ID W_CC_C_9.1.037
 Intel Fortran Compiler for EM64T version 9.1
 Build 20070322, Package-ID W_FC_C_9.1.037
 Microsoft Visual Studio 2005 (libr. & linker)
 Auto Parallel: Yes
 File System: NTFS
 System State: Default

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L3 Cache: None
Other Cache: None
Memory: 8 GB (4x2 GB DDR2 5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: 1x80 GB SATA II, 7200RPM
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 64-bit
Other Software: MicroQuill SmartHeap Library 8.1

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	<u>424</u>	<u>32.1</u>	424	32.1	422	32.2	421	32.3	<u>426</u>	<u>31.9</u>	426	31.9
416.gamess	<u>983</u>	<u>19.9</u>	982	19.9	983	19.9	965	20.3	965	20.3	<u>965</u>	<u>20.3</u>
433.milc	856	10.7	856	10.7	<u>856</u>	<u>10.7</u>	<u>864</u>	<u>10.6</u>	864	10.6	864	10.6
434.zeusmp	597	15.2	598	15.2	<u>598</u>	<u>15.2</u>	597	15.2	598	15.2	<u>598</u>	<u>15.2</u>
435.gromacs	390	18.3	<u>389</u>	<u>18.4</u>	389	18.4	380	18.8	378	18.9	<u>378</u>	<u>18.9</u>
436.cactusADM	312	38.4	<u>312</u>	<u>38.4</u>	312	38.3	312	38.4	<u>312</u>	<u>38.4</u>	312	38.3
437.leslie3d	<u>619</u>	<u>15.2</u>	619	15.2	616	15.3	<u>619</u>	<u>15.2</u>	619	15.2	616	15.3
444.namd	516	15.5	<u>515</u>	<u>15.6</u>	515	15.6	516	15.5	<u>515</u>	<u>15.6</u>	515	15.6
447.dealII	729	15.7	728	15.7	<u>728</u>	<u>15.7</u>	701	16.3	701	16.3	<u>701</u>	<u>16.3</u>
450.soplex	650	12.8	650	12.8	<u>650</u>	<u>12.8</u>	642	13.0	642	13.0	<u>642</u>	<u>13.0</u>
453.povray	<u>263</u>	<u>20.2</u>	263	20.2	263	20.2	<u>199</u>	<u>26.7</u>	199	26.7	199	26.7
454.calculix	569	14.5	<u>569</u>	<u>14.5</u>	569	14.5	<u>544</u>	<u>15.2</u>	545	15.2	544	15.2
459.GemsFDTD	621	17.1	<u>620</u>	<u>17.1</u>	620	17.1	621	17.1	<u>620</u>	<u>17.1</u>	620	17.1
465.tonto	650	15.1	<u>650</u>	<u>15.1</u>	653	15.1	595	16.5	<u>593</u>	<u>16.6</u>	593	16.6
470.lbm	<u>1889</u>	<u>7.28</u>	1891	7.27	1889	7.28	1890	7.27	1890	7.27	<u>1890</u>	<u>7.27</u>
481.wrf	599	18.6	<u>599</u>	<u>18.6</u>	599	18.6	599	18.6	<u>599</u>	<u>18.6</u>	599	18.6
482.sphinx3	933	20.9	935	20.9	<u>934</u>	<u>20.9</u>	914	21.3	914	21.3	<u>914</u>	<u>21.3</u>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Base Compiler Invocation

C benchmarks:
icl -Qvc8 -Qc99

C++ benchmarks:
icl -Qvc8

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qvc8 -Qc99 ifort



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Base Portability Flags

```

410.bwaves: -DSPEC_CPU_P64
416.gamess: -DSPEC_CPU_P64
433.milc: -D_Complex= -DSPEC_CPU_P64
434.zeusmp: -DSPEC_CPU_P64
435.gromacs: -D_Complex= -DSPEC_CPU_P64
436.cactusADM: -D_Complex= -DSPEC_CPU_P64 -Qlowercase /assume:underscore
437.leslie3d: -DSPEC_CPU_P64
444.namd: -DSPEC_CPU_P64 /TP
447.dealII: -D_Complex= -DSPEC_CPU_P64 -DBOOST_NO_INTRINSIC_WCHAR_T
-DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
450.soplex: -DSPEC_CPU_P64
453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
454.calculix: -D_Complex= -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER
-Qlowercase
459.GemsFDTD: -DSPEC_CPU_P64
465.tonto: -DSPEC_CPU_P64
470.lbm: -D_Complex= -DSPEC_CPU_P64
481.wrf: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
482.sphinx3: -D_Complex= -DSPEC_CPU_P64

```

Base Optimization Flags

```

C benchmarks:
-fast -Qparallel -F950000000 shlw32M.lib
-link -FORCE:MULTIPLE

C++ benchmarks:
-fast -Qparallel -Qcxx-features -F950000000 shlw32M.lib
-link -FORCE:MULTIPLE

Fortran benchmarks:
-fast -Qparallel -F950000000 shlw32M.lib
-link -FORCE:MULTIPLE

Benchmarks using both Fortran and C:
-fast -Qparallel -F950000000 shlw32M.lib
-link -FORCE:MULTIPLE

```

Peak Compiler Invocation

```

C benchmarks:
icl -Qvc8 -Qc99

C++ benchmarks:
icl -Qvc8

```

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Peak Compiler Invocation (Continued)

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qvc8 -Qc99 ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

-Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -F950000000 shlw32M.lib
-link -FORCE:MULTIPLE

C++ benchmarks:

444.namd: basepeak = yes

447.dealII: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx-features
-F950000000 shlw32M.lib -link -FORCE:MULTIPLE

450.soplex: Same as 447.dealII

453.povray: Same as 447.dealII

Fortran benchmarks:

410.bwaves: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qparallel
-F950000000 shlw32M.lib -link -FORCE:MULTIPLE

416.gamess: -fast -F950000000 shlw32M.lib
-link -FORCE:MULTIPLE

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: Same as 410.bwaves

Benchmarks using both Fortran and C:

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Peak Optimization Flags (Continued)

435.gromacs: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -F950000000
shlW32M.lib -link -FORCE:MULTIPLE

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-cpu2006-ic91-win-flags.html>

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

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

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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