SPEC® CFP2006 Result

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NEC Corporation

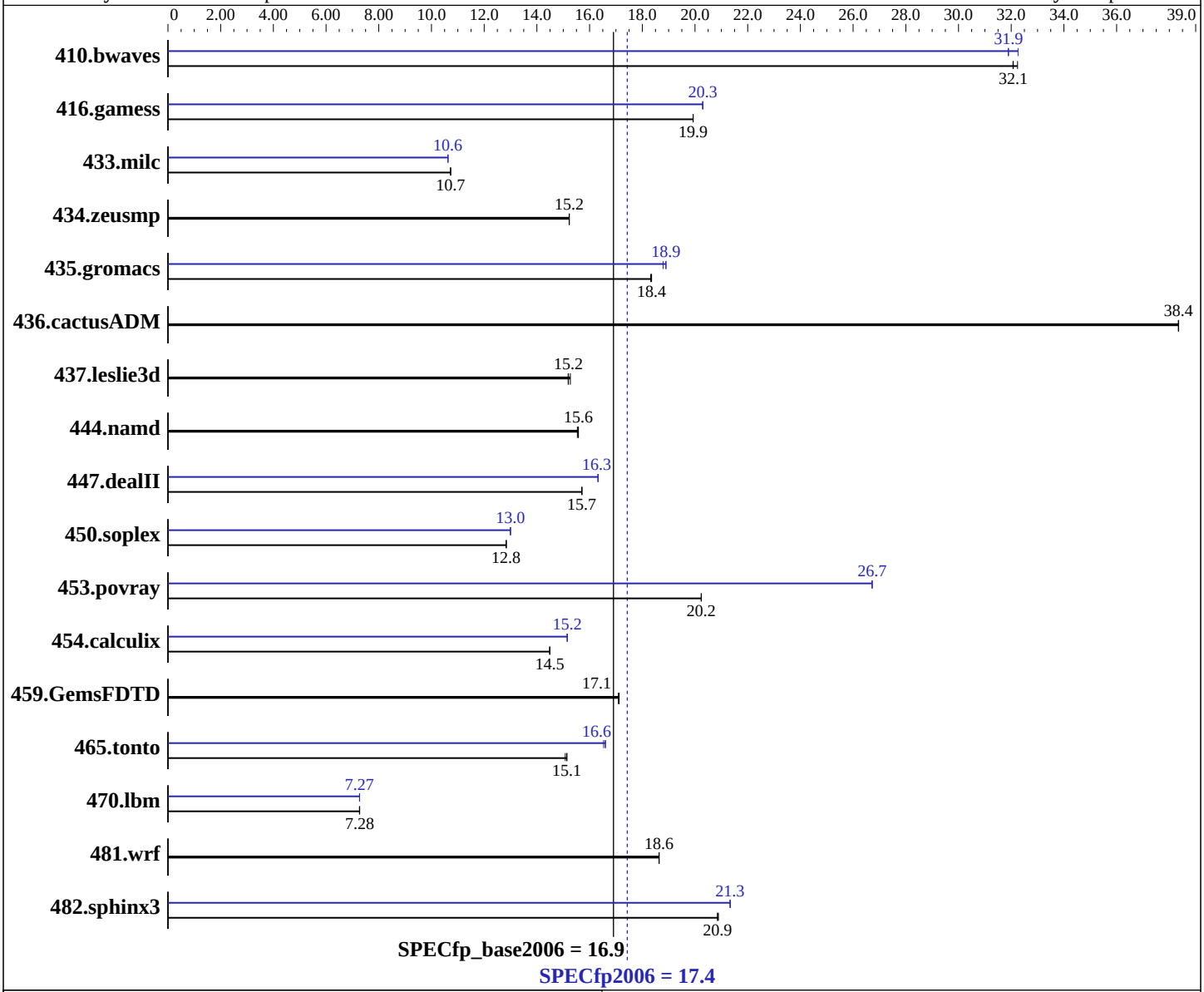
T120Rb-1
(Intel Xeon processor 5160)

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

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
```

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:

Continued on next page

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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