SPEC® CFP2006 Result

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NEC Corporation

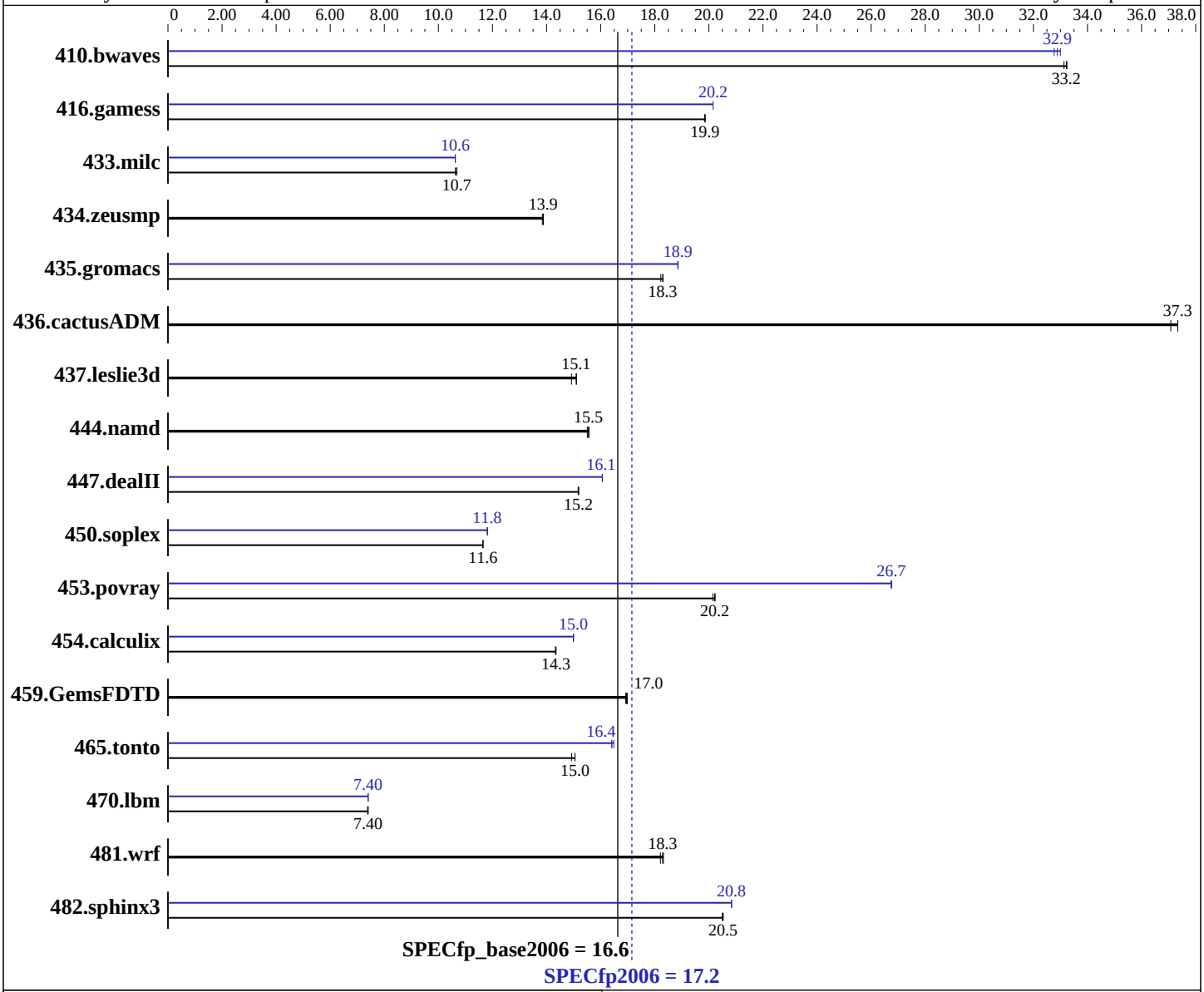
Express5800/120Li
(Intel Xeon processor 5160)

SPECfp®2006 = 17.2

SPECfp_base2006 = 16.6

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 5160
CPU Characteristics:	3.00 GHz, 4 MB L2, 1333 MHz 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 Service Pack1
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

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L3 Cache: None
Other Cache: None
Memory: 8 GB (8x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: 1x36.3 GB SAS, 15000RPM
Other Hardware: None

System State: Default
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	410	33.1	**409**	**33.2**	409	33.2	412	33.0	**413**	**32.9**	415	32.8
416.gamess	987	19.8	**986**	**19.9**	986	19.9	971	20.2	**972**	**20.2**	972	20.2
433.milc	864	10.6	860	10.7	**860**	**10.7**	864	10.6	**864**	**10.6**	864	10.6
434.zeusmp	657	13.8	656	13.9	**656**	**13.9**	657	13.8	656	13.9	**656**	**13.9**
435.gromacs	390	18.3	**390**	**18.3**	392	18.2	379	18.9	**379**	**18.9**	379	18.9
436.cactusADM	**320**	**37.3**	320	37.3	322	37.1	**320**	**37.3**	320	37.3	322	37.1
437.leslie3d	622	15.1	**623**	**15.1**	630	14.9	622	15.1	**623**	**15.1**	630	14.9
444.namd	**516**	**15.5**	517	15.5	515	15.6	**516**	**15.5**	517	15.5	515	15.6
447.dealII	**754**	**15.2**	754	15.2	753	15.2	**712**	**16.1**	712	16.1	712	16.1
450.soplex	716	11.6	716	11.6	**716**	**11.6**	706	11.8	**706**	**11.8**	706	11.8
453.povray	**263**	**20.2**	264	20.2	263	20.2	199	26.7	199	26.8	**199**	**26.7**
454.calculix	576	14.3	575	14.3	**575**	**14.3**	550	15.0	**550**	**15.0**	550	15.0
459.GemsFDTD	625	17.0	**626**	**17.0**	627	16.9	625	17.0	**626**	**17.0**	627	16.9
465.tonto	654	15.1	**654**	**15.0**	659	14.9	**600**	**16.4**	597	16.5	600	16.4
470.lbm	1857	7.40	1861	7.38	**1857**	**7.40**	1857	7.40	1856	7.40	**1856**	**7.40**
481.wrf	610	18.3	**611**	**18.3**	613	18.2	610	18.3	**611**	**18.3**	613	18.2
482.sphinx3	951	20.5	**950**	**20.5**	949	20.5	935	20.8	936	20.8	**935**	**20.8**

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 -link -FORCE:MULTIPLE

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

Fortran benchmarks:
-fast -Qparallel -F950000000 -link -FORCE:MULTIPLE

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

Peak Compiler Invocation

C benchmarks:
icl -Qvc8 -Qc99

C++ benchmarks:
icl -Qvc8

Fortran benchmarks:
ifort

Continued on next page

Peak Compiler Invocation (Continued)

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
-link -FORCE:MULTIPLE

C++ benchmarks:

444.namd: basepeak = yes

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

416.gamess: -fast -F950000000 -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:

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

436.cactusADM: basepeak = yes

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Peak Optimization Flags (Continued)

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-win-flags.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/NEC-ic91-FP-win-flags.xml`

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

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 14:31:10 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 27 November 2007.