SPEC® CFP2006 Result

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NEC Corporation

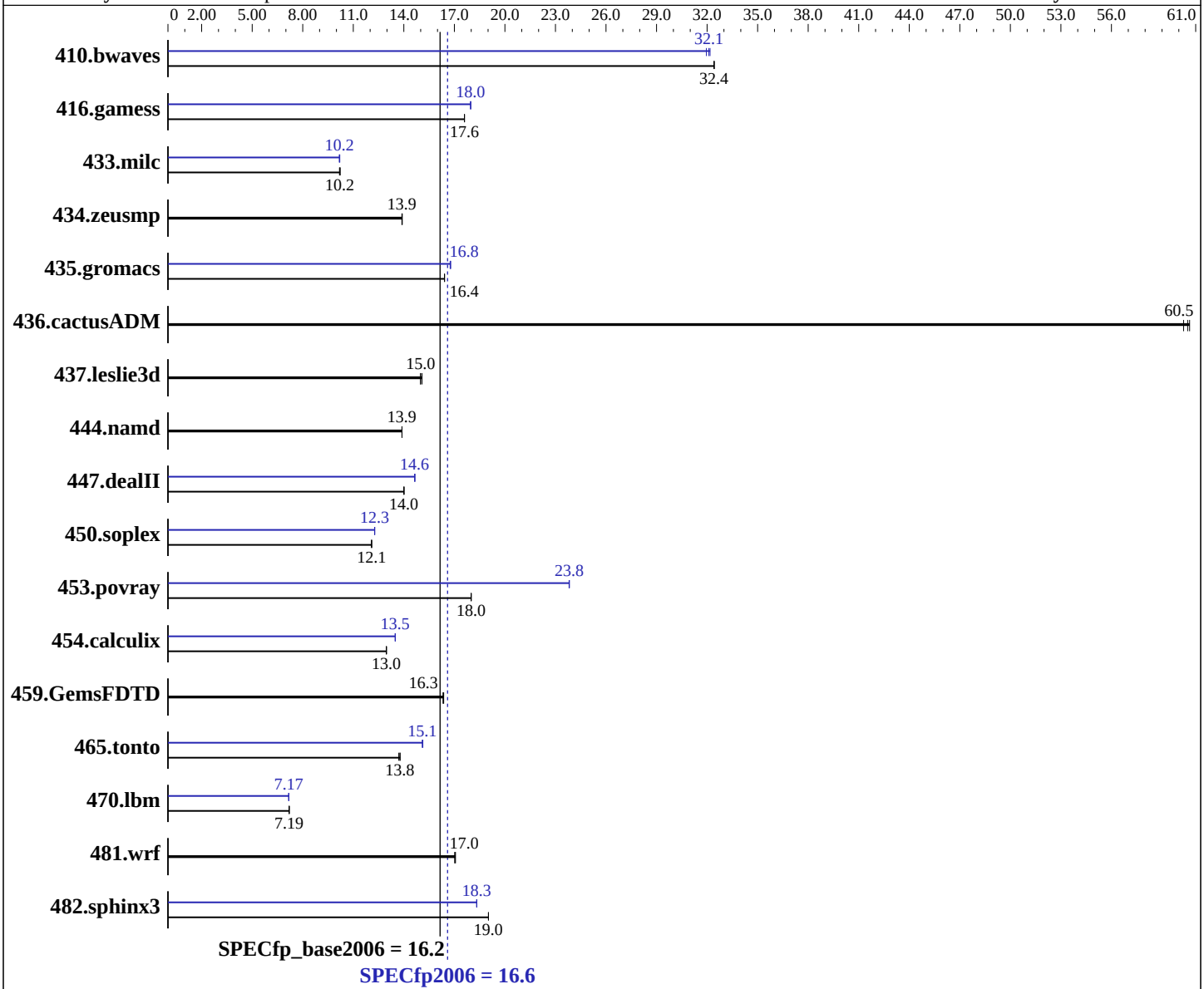
Express5800/120Ri-2
(Intel Xeon processor X5355)

SPECfp®2006 = 16.6

SPECfp_base2006 = 16.2

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Apr-2007
Hardware Availability: Jan-2007
Software Availability: Jan-2007



Hardware

CPU Name:	Intel Xeon X5355
CPU Characteristics:	2.66 GHz, 2x4 MB L2 shared, 1333 MHz bus
CPU MHz:	2667
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	8 MB I+D on chip per chip, 4 MB shared / 2 cores

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Software

Operating System:	Windows Server 2003, Enterprise x64 Edition
Compiler:	Intel C++ Compiler for EM64T version 9.1 Build 20070109, Package-ID W_CC_C_9.1.034 Intel Fortran Compiler for EM64T version 9.1 Build 20070109, Package-ID W_FC_C_9.1.034 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 (8x1 GB DDR2 5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: 73.2GB SAS, 15000RPM
Other Hardware: None

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	419	32.4	419	32.4	**419**	**32.4**	**423**	**32.1**	422	32.2	425	32.0
416.gamess	**1113**	**17.6**	1112	17.6	1113	17.6	**1090**	**18.0**	1090	18.0	1090	18.0
433.milc	898	10.2	902	10.2	**899**	**10.2**	900	10.2	**902**	**10.2**	902	10.2
434.zeusmp	654	13.9	**655**	**13.9**	655	13.9	654	13.9	**655**	**13.9**	655	13.9
435.gromacs	435	16.4	**435**	**16.4**	435	16.4	426	16.8	**426**	**16.8**	426	16.7
436.cactusADM	**197**	**60.5**	197	60.6	198	60.3	**197**	**60.5**	197	60.6	198	60.3
437.leslie3d	627	15.0	**627**	**15.0**	623	15.1	627	15.0	**627**	**15.0**	623	15.1
444.namd	577	13.9	**577**	**13.9**	577	13.9	577	13.9	**577**	**13.9**	577	13.9
447.dealII	817	14.0	816	14.0	**817**	**14.0**	781	14.6	**781**	**14.6**	781	14.7
450.soplex	690	12.1	**690**	**12.1**	690	12.1	680	12.3	**680**	**12.3**	679	12.3
453.povray	**296**	**18.0**	296	18.0	296	18.0	223	23.8	**223**	**23.8**	223	23.8
454.calculix	**636**	**13.0**	637	13.0	636	13.0	611	13.5	**612**	**13.5**	612	13.5
459.GemsFDTD	648	16.4	650	16.3	**649**	**16.3**	648	16.4	650	16.3	**649**	**16.3**
465.tonto	**715**	**13.8**	714	13.8	718	13.7	652	15.1	650	15.1	**651**	**15.1**
470.lbm	**1910**	**7.19**	1909	7.20	1910	7.19	1916	7.17	**1916**	**7.17**	1916	7.17
481.wrf	654	17.1	656	17.0	**656**	**17.0**	654	17.1	656	17.0	**656**	**17.0**
482.sphinx3	**1025**	**19.0**	1024	19.0	1025	19.0	1064	18.3	**1063**	**18.3**	1063	18.3

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

General Notes

```
The Express5800/120Rg-1 and the Express5800/120Ri-2 models are
electronically equivalent.
The results have been measured on a Express5800/120Ri-2 model.
```

Base Compiler Invocation

C benchmarks:

```
icl -Qvc8 -Qc99
```

C++ benchmarks:

```
icl -Qvc8
```

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Base Compiler Invocation (Continued)

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

C++ benchmarks:
-fast -Qparallel -Qcxx-features -F950000000

Fortran benchmarks:
-fast -Qparallel -F950000000

Benchmarks using both Fortran and C:
-fast -Qparallel -F950000000

Peak Compiler Invocation

C benchmarks:
icl -Qvc8 -Qc99

C++ benchmarks:
icl -Qvc8

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

C++ benchmarks:

444.namd: basepeak = yes

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

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

416.gamess: -fast -F950000000

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

Continued on next page

Peak Optimization Flags (Continued)

465.tonto: `Same as 410.bwaves`

Benchmarks using both Fortran and C:

435.gromacs: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast -F950000000`

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-flags.20090714.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/NEC-cpu2006-ic91-flags.20090714.xml`

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