



SPEC® CFP2006 Result

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NEC Corporation

Express5800/120R-g-1
(Intel Xeon processor X5355)

SPECfp®_rate2006 = 58.1

SPECfp_rate_base2006 = 56.3

CPU2006 license: 9006

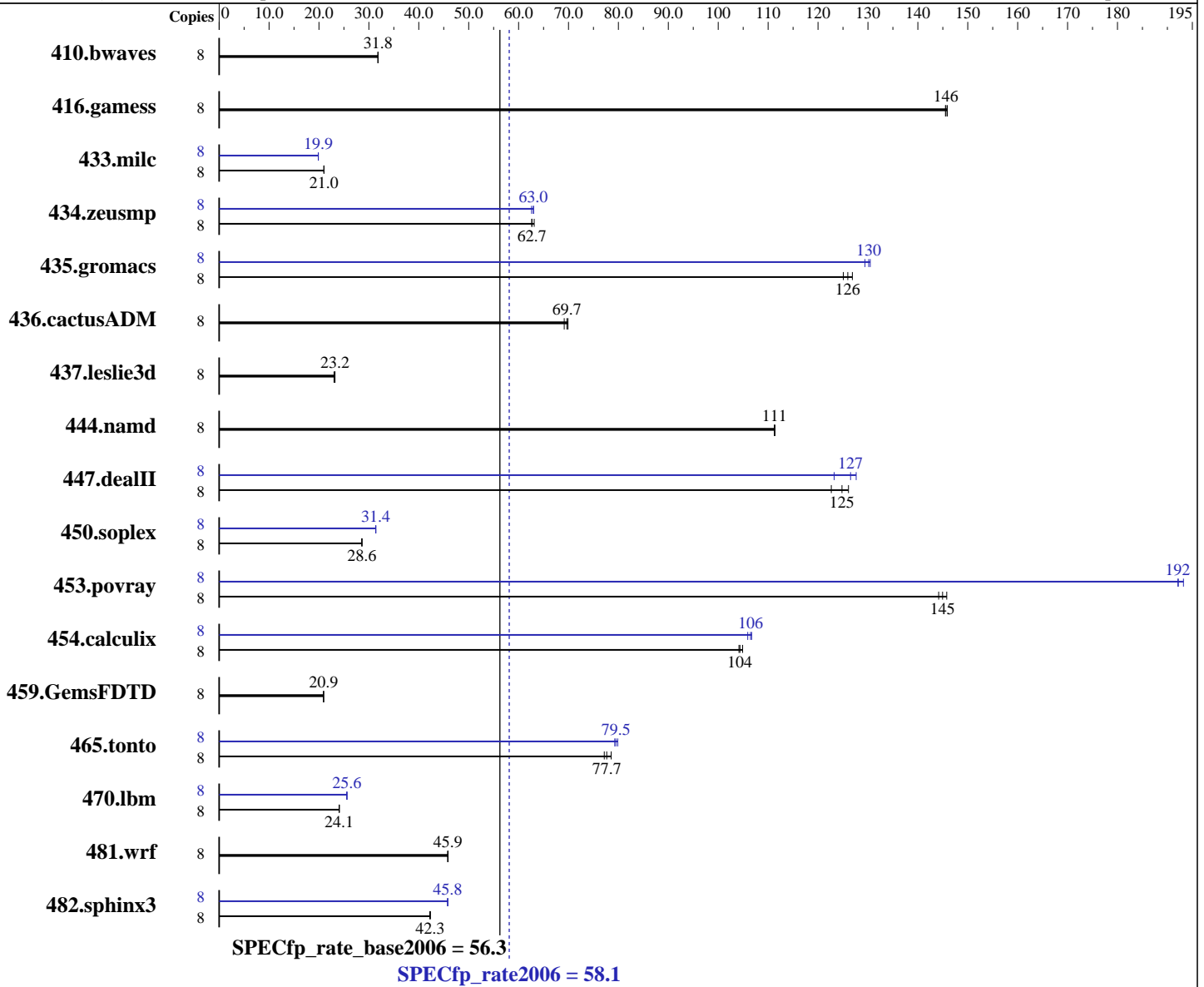
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Jun-2007

Hardware Availability: Jan-2007

Software Availability: Apr-2007



Hardware

CPU Name: Intel Xeon X5355
 CPU Characteristics: 2.66 GHz, 2x4 MB L2 shared, 1333 MHz bus
 CPU MHz: 2666
 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: 64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp on an x86_64
 Compiler: Intel C++ Compiler for IA32/EM64T application, Version 9.1 - Build 20070320, Package-ID: l_cc_c_9.1.049
 Intel Fortran Compiler for IA32/EM64T application, Version 9.1 - Build 20070320, Package ID: l_fc_c_9.1.045
 Auto Parallel: No
 File System: ext2

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L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2 GB DDR2 5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem: 1x73.2 GB SAS, 15000RPM
Other Hardware: None

System State: Multiuser, Runlevel 3
Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	3416	31.8	3414	31.8	3416	31.8	8	3416	31.8	3414	31.8	3416	31.8
416.gamess	8	1076	146	1074	146	1076	146	8	1076	146	1074	146	1076	146
433.milc	8	3498	21.0	3494	21.0	3498	21.0	8	3695	19.9	3697	19.9	3696	19.9
434.zeusmp	8	1153	63.1	1162	62.7	1162	62.7	8	1163	62.6	1156	63.0	1156	63.0
435.gromacs	8	457	125	450	127	453	126	8	438	130	441	129	439	130
436.cactusADM	8	1383	69.1	1368	69.9	1372	69.7	8	1383	69.1	1368	69.9	1372	69.7
437.leslie3d	8	3241	23.2	3269	23.0	3240	23.2	8	3241	23.2	3269	23.0	3240	23.2
444.namd	8	577	111	577	111	576	111	8	577	111	577	111	576	111
447.dealII	8	746	123	733	125	726	126	8	723	127	717	128	743	123
450.soplex	8	2330	28.6	2333	28.6	2334	28.6	8	2127	31.4	2124	31.4	2126	31.4
453.povray	8	292	146	295	144	294	145	8	220	193	221	192	222	192
454.calculix	8	629	105	632	104	634	104	8	623	106	620	106	619	107
459.GemsFDTD	8	4058	20.9	4057	20.9	4054	20.9	8	4058	20.9	4057	20.9	4054	20.9
465.tonto	8	1020	77.2	1014	77.7	1002	78.5	8	986	79.9	993	79.3	990	79.5
470.lbm	8	4569	24.1	4570	24.1	4567	24.1	8	4293	25.6	4297	25.6	4293	25.6
481.wrf	8	1952	45.8	1949	45.9	1948	45.9	8	1952	45.8	1949	45.9	1948	45.9
482.sphinx3	8	3685	42.3	3694	42.2	3687	42.3	8	3404	45.8	3405	45.8	3407	45.8

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

General Notes

The system bus runs at 1333 MHz
All binaries were built with 64-bit Intel compiler except:
433.milc, 434.zeusmp, 450.soplex, 470.lbm and 482.sphinx3 in peak were built with
32-bit Intel compiler by changing the path for include and library files.

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



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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:

```
/opt/intel/cc/9.1.049/bin/icc -I/opt/intel/cc/9.1.049/include  
-L/opt/intel/cc/9.1.049/lib
```

C++ benchmarks (except as noted below):

icpc

```
450.soplex: /opt/intel/cc/9.1.049/bin/icpc  
-I/opt/intel/cc/9.1.049/include -L/opt/intel/cc/9.1.049/lib
```

Fortran benchmarks (except as noted below):

ifort

```
434.zeusmp: /opt/intel/fc/9.1.045/bin/ifort  
-I/opt/intel/fc/9.1.045/include -L/opt/intel/fc/9.1.045/lib
```

Benchmarks using both Fortran and C:

icc ifort

Peak Portability Flags

```
410.bwaves: -DSPEC_CPU_LP64  
416.gamess: -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.deallI: -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
```

```
470.lbm: Same as 433.milc
```

```
482.sphinx3: -fast
```

C++ benchmarks:

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Peak Optimization Flags (Continued)

444.namd: basepeak = yes

447.dealII: -prof_gen(pass 1) -prof_use(pass 2) -fast

450.soplex: Same as 447.dealII

453.povray: Same as 447.dealII

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: basepeak = yes

434.zeusmp: -fast

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -prof_gen(pass 1) -prof_use(pass 2) -fast

Benchmarks using both Fortran and C:

435.gromacs: -prof_gen(pass 1) -prof_use(pass 2) -fast

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-ic91-linux-flags.20090714.html>

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

<http://www.spec.org/cpu2006/flags/NEC-ic91-linux-flags.20090714.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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