SPEC® CFP2006 Result
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NEC Corporation

$SPECfp®\_rate2006 =$ 77.5

Express5800/GT110d-S (Intel Core i3-2120)
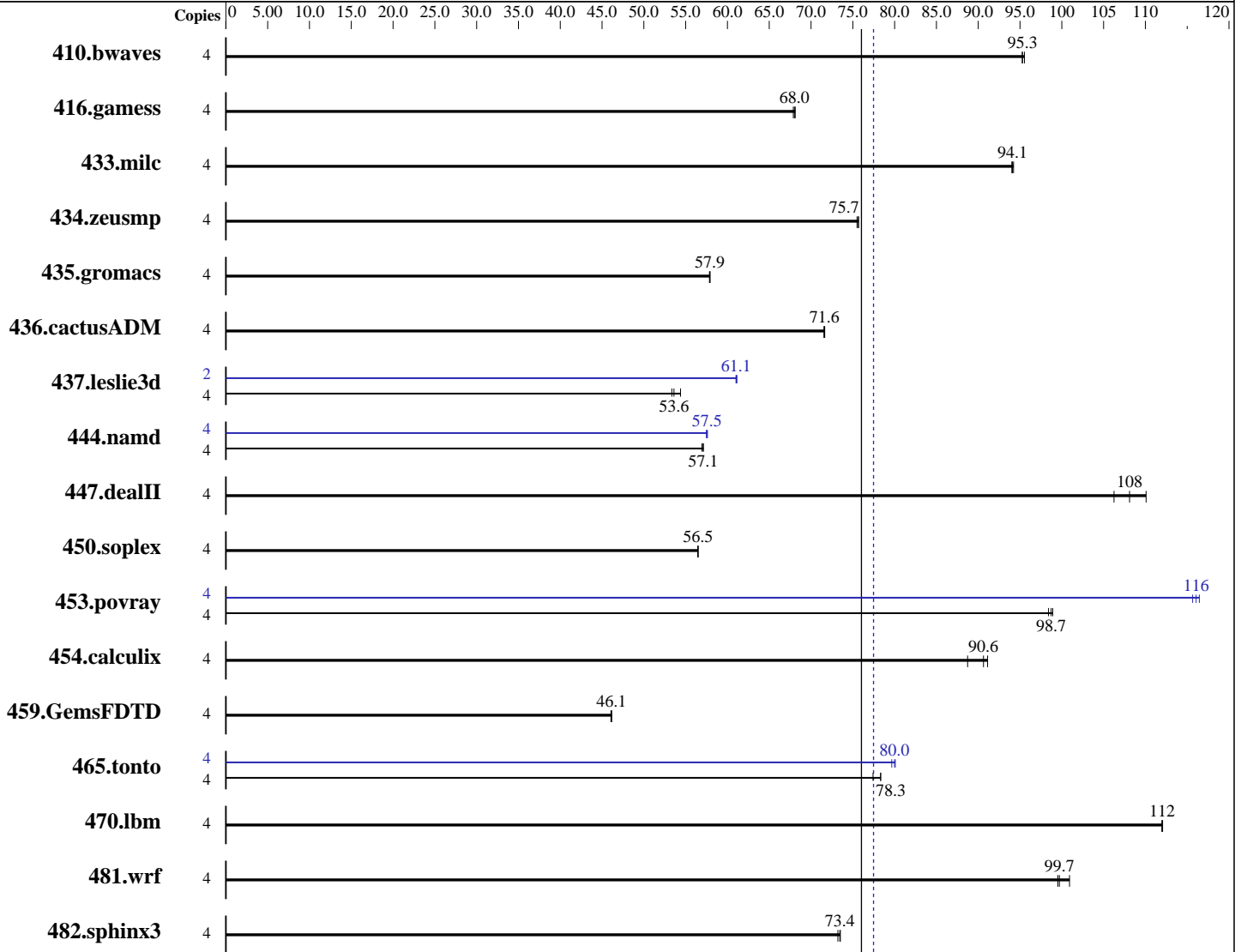
$SPECfp\_rate\_base2006 =$ 76.0

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

Test date: Sep-2011
Hardware Availability: Jun-2011
Software Availability: Mar-2011

Benchmark	Copies	Result
410.bwaves	4	95.3
416.gamess	4	68.0
433.milc	4	94.1
434.zeusmp	4	75.7
435.gromacs	4	57.9
436.cactusADM	4	71.6
437.leslie3d	2	61.1
437.leslie3d	4	53.6
444.namd	4	57.5
444.namd	4	57.1
447.dealII	4	108
450.soplex	4	56.5
453.povray	4	116
453.povray	4	98.7
454.calculix	4	90.6
459.GemsFDTD	4	46.1
465.tonto	4	80.0
465.tonto	4	78.3
470.lbm	4	112
481.wrf	4	99.7
482.sphinx3	4	73.4

SPECfp_rate_base2006 = 76.0

SPECfp_rate2006 = 77.5

Hardware

CPU Name: Intel Core i3-2120
CPU Characteristics:
CPU MHz: 3300
FPU: Integrated
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip, 2 threads/core
CPU(s) orderable: 1 chip
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB I+D on chip per core

Continued on next page

Software

Operating System: SUSE Linux Enterprise Server 11 SP1 (x86_64), Kernel 2.6.32.12-0.7-default
Compiler: Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64, Version 12.0.3.174 Build 20110309
Auto Parallel: No
File System: ext3
System State: Run level 3 (multi-user)
Base Pointers: 64-bit

Continued on next page

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L3 Cache:	3 MB I+D on chip per chip
Other Cache:	None
Memory:	8 GB (2 x 4 GB 2Rx8 PC3-10600E-9, ECC)
Disk Subsystem:	1 x 160 GB SATA, 7200 RPM
Other Hardware:	None

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	4	569	95.5	**570**	**95.3**	571	95.3	4	569	95.5	**570**	**95.3**	571	95.3
416.gamess	4	**1152**	**68.0**	1154	67.9	1150	68.1	4	**1152**	**68.0**	1154	67.9	1150	68.1
433.milc	4	390	94.2	391	94.0	**390**	**94.1**	4	390	94.2	391	94.0	**390**	**94.1**
434.zeusmp	4	481	75.7	482	75.5	**481**	**75.7**	4	481	75.7	482	75.5	**481**	**75.7**
435.gromacs	4	494	57.8	**493**	**57.9**	493	57.9	4	494	57.8	**493**	**57.9**	493	57.9
436.cactusADM	4	668	71.5	667	71.6	**668**	**71.6**	4	668	71.5	667	71.6	**668**	**71.6**
437.leslie3d	4	691	54.4	705	53.3	**701**	**53.6**	2	308	61.0	308	61.1	**308**	**61.1**
444.namd	4	562	57.1	563	56.9	**562**	**57.1**	4	557	57.6	558	57.5	**558**	**57.5**
447.dealII	4	431	106	**423**	**108**	416	110	4	431	106	**423**	**108**	416	110
450.soplex	4	591	56.5	**591**	**56.5**	591	56.5	4	591	56.5	**591**	**56.5**	591	56.5
453.povray	4	**216**	**98.7**	215	98.9	216	98.4	4	183	116	**183**	**116**	184	116
454.calculix	4	**364**	**90.6**	362	91.1	372	88.7	4	**364**	**90.6**	362	91.1	372	88.7
459.GemsFDTD	4	921	46.1	**920**	**46.1**	920	46.2	4	921	46.1	**920**	**46.1**	920	46.2
465.tonto	4	**503**	**78.3**	502	78.3	508	77.4	4	494	79.7	**492**	**80.0**	492	80.1
470.lbm	4	490	112	**491**	**112**	491	112	4	490	112	**491**	**112**	491	112
481.wrf	4	443	101	**448**	**99.7**	449	99.5	4	443	101	**448**	**99.7**	449	99.5
482.sphinx3	4	1065	73.2	**1061**	**73.4**	1061	73.5	4	1065	73.2	**1061**	**73.4**	1061	73.5

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

Submit Notes

    The config file option 'submit' was used.
     numactl was used to bind copies to the cores

Operating System Notes

     'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
     Huge pages were not configured for this run

Platform Notes

    Default BIOS settings were used.

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Base Compiler Invocation

C benchmarks:
```
icc   -m64
```

C++ benchmarks:
```
icpc  -m64
```

Fortran benchmarks:
```
ifort -m64
```

Benchmarks using both Fortran and C:
```
icc   -m64 ifort -m64
```

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:
```
-xAVX -ipo -O3 -no-prec-div -static -ansi-alias
```

C++ benchmarks:
```
-xAVX -ipo -O3 -no-prec-div -static -ansi-alias
```

Fortran benchmarks:
```
-xAVX -ipo -O3 -no-prec-div -static
```

Benchmarks using both Fortran and C:
```
-xAVX -ipo -O3 -no-prec-div -static -ansi-alias
```

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Peak Compiler Invocation

C benchmarks:
        icc   -m64

C++ benchmarks:
        icpc   -m64

Fortran benchmarks:
        ifort -m64

Benchmarks using both Fortran and C:
        icc   -m64 ifort -m64

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

        433.milc: basepeak = yes

        470.lbm: basepeak = yes

        482.sphinx3: basepeak = yes

C++ benchmarks:

        444.namd: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
                -no-prec-div(pass 2) -prof-use(pass 2) -fno-alias
                -auto-ilp32

        447.dealII: basepeak = yes

        450.soplex: basepeak = yes

        453.povray: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
                -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias
                -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Fortran benchmarks:

        410.bwaves: basepeak = yes

        416.gamess: basepeak = yes

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Peak Optimization Flags (Continued)

434.zeusmp: basepeak = yes

437.leslie3d: -xAVX -ipo -O3 -no-prec-div
        -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

459.GemsFDTD: basepeak = yes

465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
        -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto
        -inline-calloc -opt-malloc-options=3
        -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.html
http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revF.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml
http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revF.xml

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For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 21:39:57 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 27 September 2011.