SPEC® CFP2006 Result
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Fujitsu

PRIMERGY RX300 S6, Intel Xeon E5506, 2.13 GHz

$SPECfp®\_rate2006 =$ 62.5

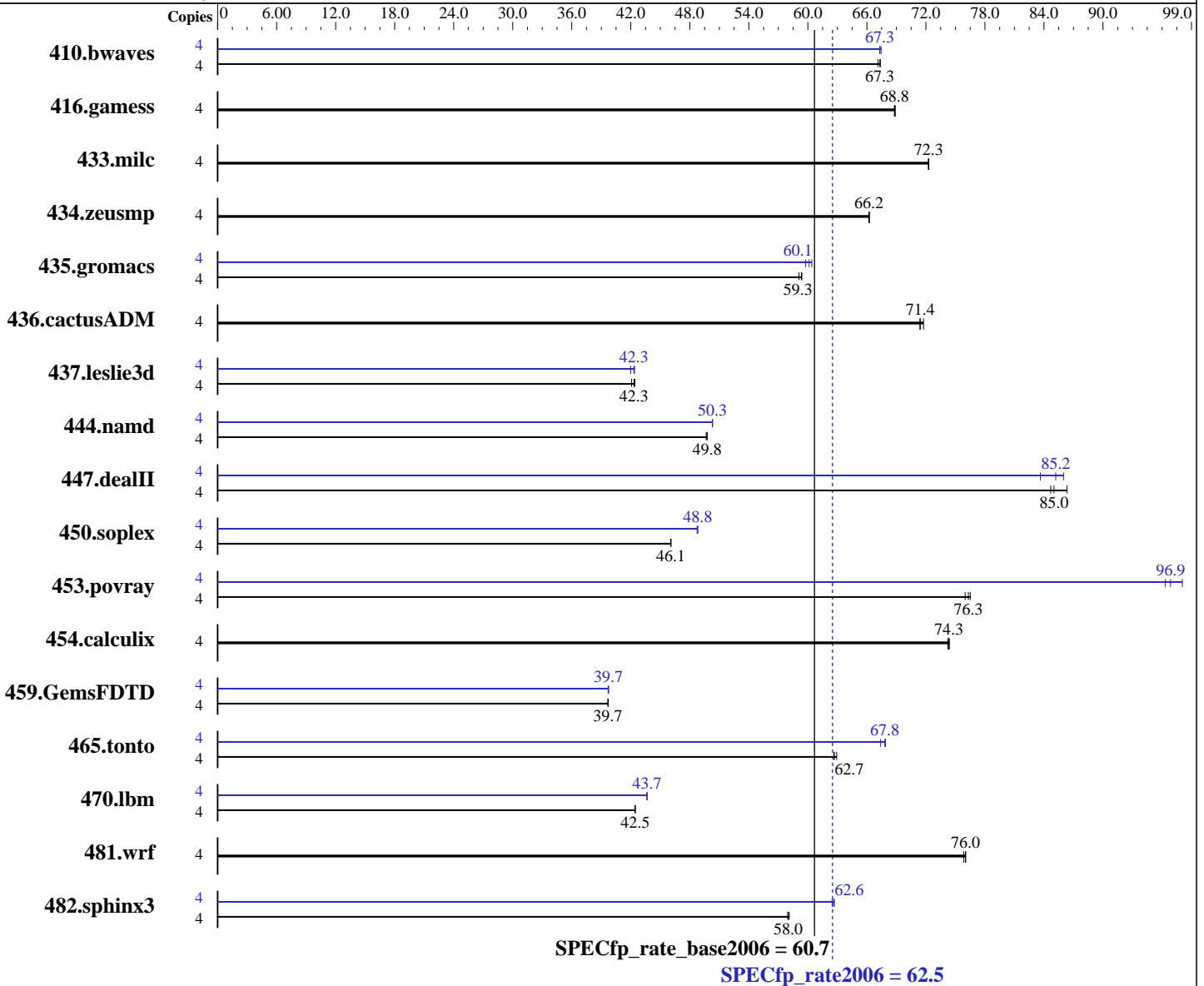$SPECfp\_rate\_base2006 =$ 60.7

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Feb-2010
Hardware Availability: Apr-2010
Software Availability: Jan-2010

Copies	Benchmark	Base	Peak
4	410.bwaves	67.3	67.3
4	416.gamess	68.8	
4	433.milc	72.3	
4	434.zeusmp	66.2	
4	435.gromacs	59.3	60.1
4	436.cactusADM	71.4	
4	437.leslie3d	42.3	42.3
4	444.namd	49.8	50.3
4	447.dealII	85.0	85.2
4	450.soplex	46.1	48.8
4	453.povray	76.3	96.9
4	454.calculix	74.3	
4	459.GemsFDTD	39.7	39.7
4	465.tonto	62.7	67.8
4	470.lbm	42.5	43.7
4	481.wrf	76.0	
4	482.sphinx3	58.0	62.6

SPECfp_rate_base2006 = 60.7

SPECfp_rate2006 = 62.5

Hardware
CPU Name: Intel Xeon E5506
CPU Characteristics:
CPU MHz: 2133
FPU: Integrated
CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
CPU(s) orderable: 1,2 chips
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 (x86_64), Kernel 2.6.27.19-5-default
Compiler: Intel C++ and Fortran Professional Compiler for IA32 and Intel 64, Version 11.1
Build 20091130 Package ID: l_cproc_p_11.1.064, l_cprof_p_11.1.064
Auto Parallel: No
File System: ext3
System State: Multi-User Run Level 3
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L3 Cache: 4 MB I+D on chip per chip	Base Pointers: 64-bit
Other Cache: None	Peak Pointers: 32/64-bit
Memory: 24 GB (6x4 GB PC3-10600R, 2 rank, CL9-9-9, ECC, see add'l detail in notes)	Other Software: Binutils 2.18.50.0.7.20080502
Disk Subsystem: 1 x SATA, 250 GB, 5.4 krpm	
Other Hardware: None	

Results Table

	Base						Peak					
Benchmark	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
410.bwaves	4	810	67.1	807	67.4	**807**	**67.3**	4	808	67.3	806	67.4	**807**	**67.3**
416.gamess	4	1137	68.9	**1138**	**68.8**	1138	68.8	4	1137	68.9	**1138**	**68.8**	1138	68.8
433.milc	4	508	72.3	**508**	**72.3**	508	72.2	4	508	72.3	**508**	**72.3**	508	72.2
434.zeusmp	4	550	66.2	**550**	**66.2**	549	66.3	4	550	66.2	**550**	**66.2**	549	66.3
435.gromacs	4	**481**	**59.3**	481	59.4	483	59.1	4	473	60.4	**475**	**60.1**	478	59.8
436.cactusADM	4	670	71.4	**669**	**71.4**	666	71.8	4	670	71.4	**669**	**71.4**	666	71.8
437.leslie3d	4	**888**	**42.3**	886	42.4	894	42.1	4	895	42.0	**889**	**42.3**	887	42.4
444.namd	4	646	49.7	645	49.8	**645**	**49.8**	4	638	50.3	638	50.3	**638**	**50.3**
447.dealII	4	540	84.7	530	86.3	**538**	**85.0**	4	532	86.0	**537**	**85.2**	547	83.6
450.soplex	4	724	46.1	**724**	**46.1**	724	46.1	4	684	48.7	684	48.8	**684**	**48.8**
453.povray	4	280	76.0	278	76.5	**279**	**76.3**	4	**220**	**96.9**	221	96.3	217	98.1
454.calculix	4	444	74.4	**444**	**74.3**	445	74.2	4	444	74.4	**444**	**74.3**	445	74.2
459.GemsFDTD	4	1069	39.7	1070	39.7	**1070**	**39.7**	4	**1068**	**39.7**	1069	39.7	1068	39.7
465.tonto	4	625	62.9	628	62.6	**628**	**62.7**	4	**580**	**67.8**	584	67.4	580	67.9
470.lbm	4	1295	42.4	1295	42.5	**1295**	**42.5**	4	1259	43.7	**1259**	**43.7**	1259	43.7
481.wrf	4	589	75.8	**588**	**76.0**	588	76.0	4	589	75.8	**588**	**76.0**	588	76.0
482.sphinx3	4	1342	58.1	**1344**	**58.0**	1345	58.0	4	**1245**	**62.6**	1243	62.7	1248	62.5

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

Platform Notes

    The system automatically configures the memory to run at 800 MHz.

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General Notes

 This result was measured on the PRIMERGY TX300 S6. The PRIMERGY TX300 S6
 and the PRIMERGY RX300 S6 are electronically equivalent.

 For information about Fujitsu please visit: http://www.fujitsu.com

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:
      -xSSE4.2 -ipo -O3 -no-prec-div -static

C++ benchmarks:
      -xSSE4.2 -ipo -O3 -no-prec-div -static

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Base Optimization Flags (Continued)

Fortran benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -static
```

Benchmarks using both Fortran and C:
```
-xSSE4.2 -ipo -O3 -no-prec-div -static
```

Peak Compiler Invocation

C benchmarks (except as noted below):
```
icc   -m64
```

```
482.sphinx3: icc -m32
```

C++ benchmarks (except as noted below):
```
icpc  -m64
```

```
450.soplex: icpc -m32
```

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

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

Peak 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
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
```

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Peak Optimization Flags

C benchmarks:

    433.milc: basepeak = yes

    470.lbm: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
        -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
        -opt-malloc-options=3 -ansi-alias -auto-ilp32

    482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2

C++ benchmarks:

    444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
        -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
        -fno-alias -auto-ilp32

    447.dealII: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
        -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
        -unroll2 -ansi-alias -scalar-rep-

    450.soplex: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
        -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
        -opt-malloc-options=3

    453.povray: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
        -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
        -unroll4 -ansi-alias

Fortran benchmarks:

    410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

    416.gamess: basepeak = yes

    434.zeusmp: basepeak = yes

    437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div -static

    459.GemsFDTD: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
        -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
        -unroll2 -Ob0

    465.tonto: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
        -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
        -unroll4 -auto -inline-calloc -opt-malloc-options=3

Benchmarks using both Fortran and C:

    435.gromacs: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
        -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2)
        -opt-prefetch -auto-ilp32

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Peak Optimization Flags (Continued)

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100316.00.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100316.00.xml

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