SPEC® CFP2006 Result
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Fujitsu

PRIMERGY RX300 S6, Intel Xeon X5650, 2.67 GHz

$SPECfp^®\_rate2006 =$ 123
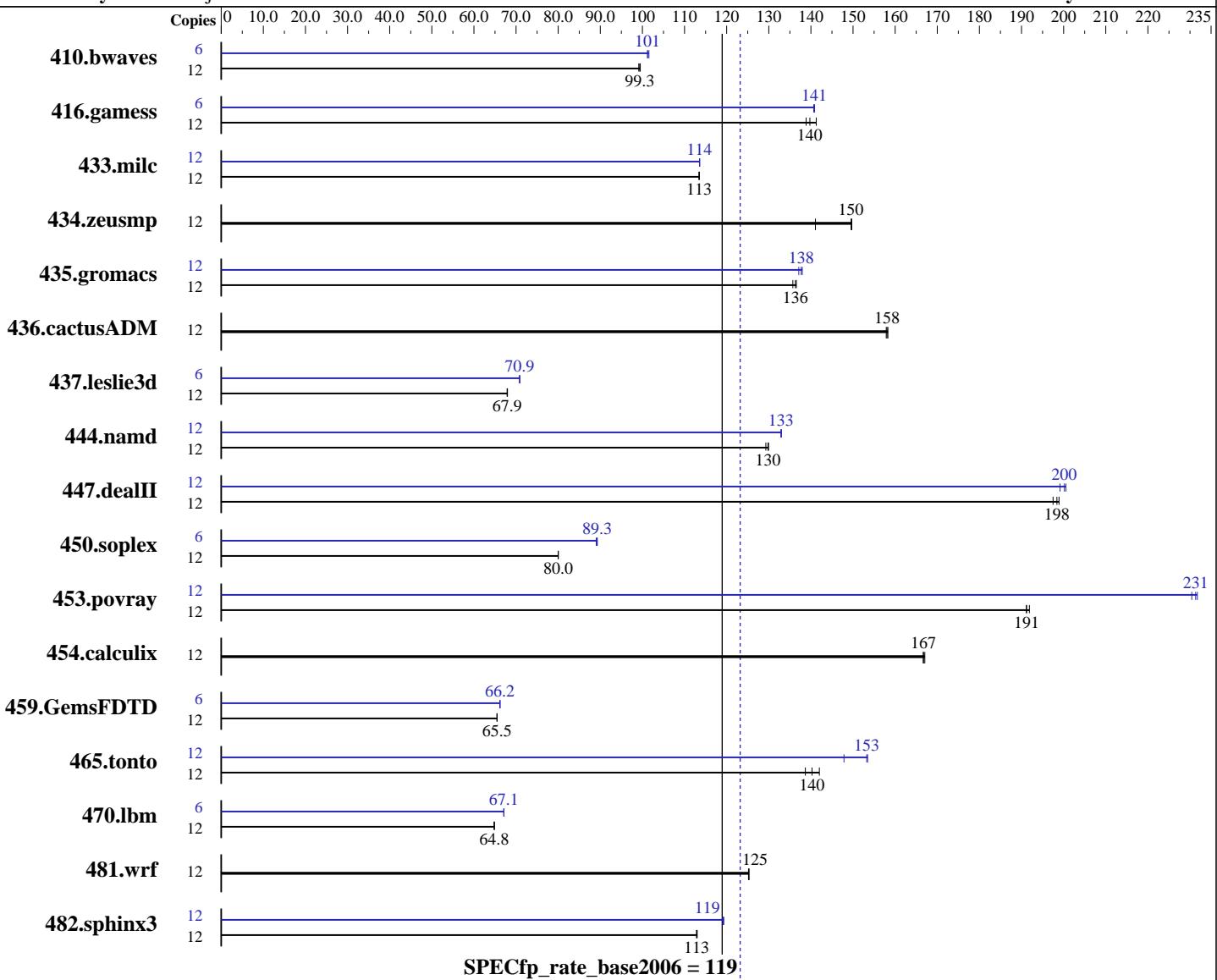
SPECfp_rate_base2006 =   119

CPU2006 license: 19	**Test date:** Mar-2010
Test sponsor: Fujitsu	**Hardware Availability:** Apr-2010
Tested by: Fujitsu	**Software Availability:** Jan-2010

Copies 0   10.0 20.0 30.0 40.0 50.0 60.0 70.0 80.0 90.0 100 110 120 130 140 150 160 170 180 190 200 210 220 235

410.bwaves — 6: 101, 12: 99.3

416.gamess — 6: 141, 12: 140

433.milc — 12: 114, 12: 113

434.zeusmp — 12: 150

435.gromacs — 12: 138, 12: 136

436.cactusADM — 12: 158

437.leslie3d — 6: 70.9, 12: 67.9

444.namd — 12: 133, 12: 130

447.dealII — 12: 200, 12: 198

450.soplex — 6: 89.3, 12: 80.0

453.povray — 12: 231, 12: 191

454.calculix — 12: 167

459.GemsFDTD — 6: 66.2, 12: 65.5

465.tonto — 12: 153, 12: 140

470.lbm — 6: 67.1, 12: 64.8

481.wrf — 12: 125

482.sphinx3 — 12: 119, 12: 113

SPECfp_rate_base2006 = 119

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Hardware

CPU Name:	Intel Xeon X5650
CPU Characteristics:	Intel Turbo Boost Technology up to 3.06 GHz
CPU MHz:	2667
FPU:	Integrated
CPU(s) enabled:	6 cores, 1 chip, 6 cores/chip, 2 threads/core
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:	12 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)	Other Software:	Binutils 2.18.50.0.7.20080502
Disk Subsystem:	1 x SATA, 250 GB, 7200 RPM		
Other Hardware:	None		

Results Table

Benchmark	Base						Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	12	1639	99.5	**1641**	**99.3**	1645	99.1	6	**805**	**101**	803	102	806	101
416.gamess	12	1692	139	1663	141	**1681**	**140**	6	**834**	**141**	834	141	835	141
433.milc	12	970	114	**971**	**113**	971	113	12	**970**	**114**	970	114	970	114
434.zeusmp	12	**730**	**150**	729	150	774	141	12	**730**	**150**	729	150	774	141
435.gromacs	12	631	136	**629**	**136**	627	137	12	**622**	**138**	625	137	621	138
436.cactusADM	12	**907**	**158**	908	158	906	158	12	**907**	**158**	908	158	906	158
437.leslie3d	12	1660	68.0	1661	67.9	**1661**	**67.9**	6	**796**	**70.9**	796	70.9	796	70.8
444.namd	12	741	130	**741**	**130**	744	129	12	724	133	724	133	**724**	**133**
447.dealII	12	690	199	**692**	**198**	695	197	12	689	199	**686**	**200**	685	201
450.soplex	12	**1251**	**80.0**	1250	80.0	1251	80.0	6	561	89.3	**561**	**89.3**	562	89.0
453.povray	12	334	191	333	192	**334**	**191**	12	275	232	277	230	**276**	**231**
454.calculix	12	594	167	593	167	**594**	**167**	12	594	167	593	167	**594**	**167**
459.GemsFDTD	12	1944	65.5	**1944**	**65.5**	1944	65.5	6	962	66.2	962	66.2	**962**	**66.2**
465.tonto	12	851	139	**842**	**140**	832	142	12	**771**	**153**	769	153	799	148
470.lbm	12	2543	64.8	**2544**	**64.8**	2544	64.8	6	1228	67.1	1229	67.1	**1228**	**67.1**
481.wrf	12	1071	125	**1070**	**125**	1070	125	12	1071	125	**1070**	**125**	1070	125
482.sphinx3	12	2072	113	2070	113	**2072**	**113**	12	1960	119	**1963**	**119**	1964	119

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

    BIOS configuration:
    Data Reuse Optimization = Disable

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SPECfp_rate_base2006 =	119

CPU2006 license: 19
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Test date: Mar-2010
Hardware Availability: Apr-2010
Software Availability: Jan-2010

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: -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 -opt-prefetch

    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: -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 -ansi-alias -scalar-rep-

    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

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Peak Optimization Flags (Continued)

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

    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.20100330.02.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.20100330.02.xml

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