SPEC® CFP2006 Result
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Fujitsu

PRIMERGY BX924 S2, Intel Xeon L5630, 2.13 GHz

$SPECfp^®\_rate2006 = \quad 77.6$

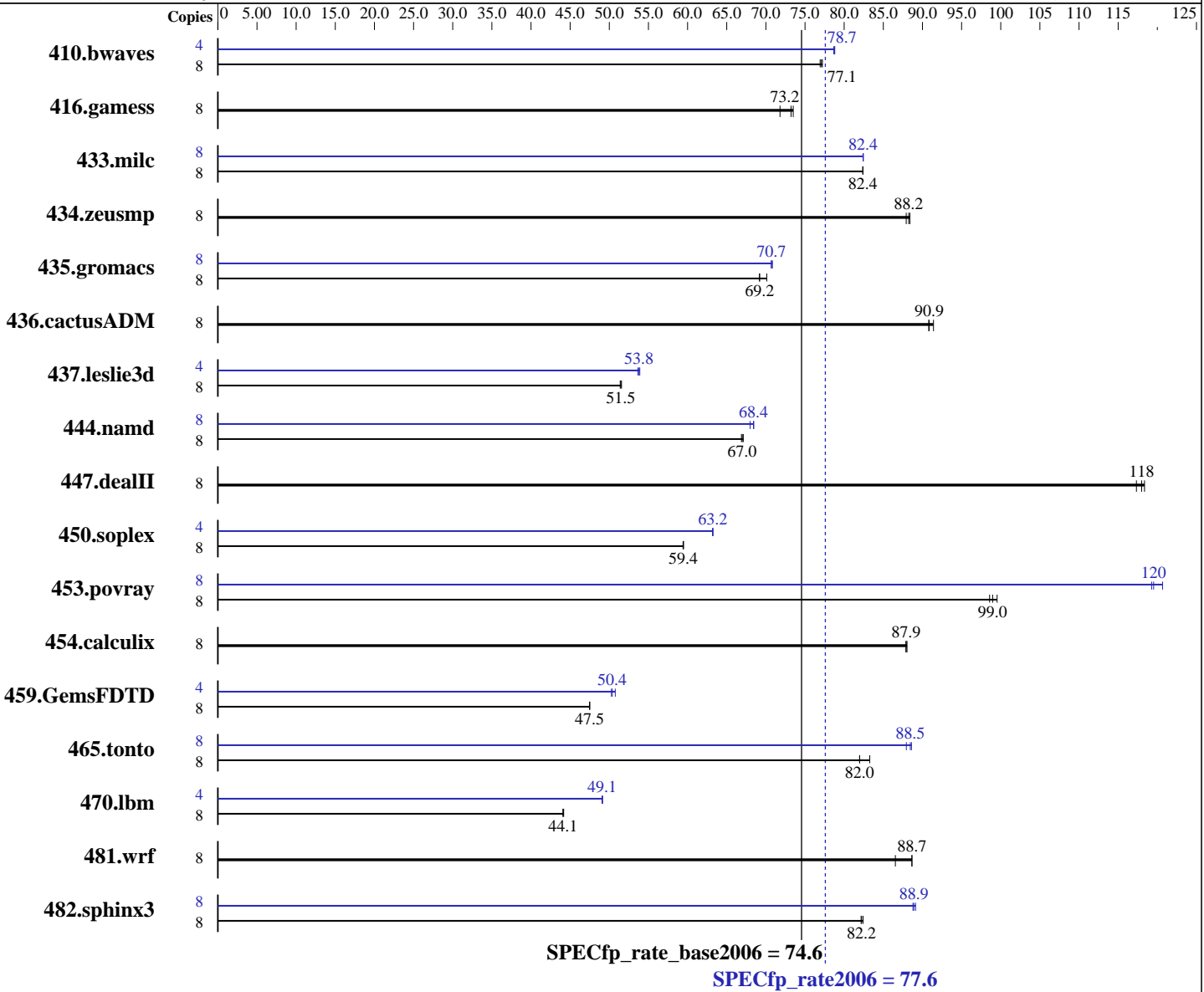$SPECfp\_rate\_base2006 = \quad 74.6$

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

Test date: Aug-2010
Hardware Availability: Jun-2010
Software Availability: Jan-2010

Benchmark	Copies	Result
410.bwaves	4	78.7
	8	77.1
416.gamess	8	73.2
433.milc	8	82.4
	8	82.4
434.zeusmp	8	88.2
435.gromacs	8	70.7
	8	69.2
436.cactusADM	8	90.9
437.leslie3d	4	53.8
	8	51.5
444.namd	8	68.4
	8	67.0
447.dealII	8	118
450.soplex	4	63.2
	8	59.4
453.povray	8	120
	8	99.0
454.calculix	8	87.9
459.GemsFDTD	4	50.4
	8	47.5
465.tonto	8	88.5
	8	82.0
470.lbm	4	49.1
	8	44.1
481.wrf	8	88.7
482.sphinx3	8	88.9
	8	82.2

SPECfp_rate_base2006 = 74.6

SPECfp_rate2006 = 77.6

Hardware

CPU Name: Intel Xeon L5630
CPU Characteristics: Intel Turbo Boost Technology up to 2.4 GHz
CPU MHz: 2133
FPU: Integrated
CPU(s) enabled: 4 cores, 1 chip, 4 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

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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: Run level 3 (multi-user)

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L3 Cache:	12 MB I+D on chip per chip
Other Cache:	None
Memory:	24 GB (6x4 GB PC3-10600R, 2 rank, CL9-9-9, ECC, see add'l detail in notes)
Disk Subsystem:	1 x SATA, 160 GB, 5400 RPM
Other Hardware:	None

Base Pointers:	64-bit
Peak Pointers:	32/64-bit
Other Software:	Binutils 2.18.50.0.7.20080502

Results Table

Benchmark	Base						Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	1408	77.2	**1410**	**77.1**	1413	76.9	4	691	78.7	690	78.8	**690**	**78.7**
416.gamess	8	2131	73.5	2181	71.8	**2139**	**73.2**	8	2131	73.5	2181	71.8	**2139**	**73.2**
433.milc	8	891	82.4	**891**	**82.4**	892	82.4	8	**891**	**82.4**	891	82.4	891	82.4
434.zeusmp	8	**825**	**88.2**	828	87.9	824	88.4	8	**825**	**88.2**	828	87.9	824	88.4
435.gromacs	8	826	69.2	815	70.1	**825**	**69.2**	8	**808**	**70.7**	806	70.8	808	70.7
436.cactusADM	8	1053	90.8	**1052**	**90.9**	1046	91.4	8	1053	90.8	**1052**	**90.9**	1046	91.4
437.leslie3d	8	**1461**	**51.5**	1463	51.4	1459	51.6	4	698	53.9	**699**	**53.8**	701	53.6
444.namd	8	959	66.9	**958**	**67.0**	956	67.1	8	944	68.0	**938**	**68.4**	937	68.5
447.dealII	8	780	117	773	118	**776**	**118**	8	780	117	773	118	**776**	**118**
450.soplex	8	1122	59.5	**1122**	**59.4**	1123	59.4	4	528	63.2	**528**	**63.2**	528	63.2
453.povray	8	428	99.5	432	98.6	**430**	**99.0**	8	353	121	357	119	**356**	**120**
454.calculix	8	751	87.9	**751**	**87.9**	750	88.0	8	751	87.9	**751**	**87.9**	750	88.0
459.GemsFDTD	8	1787	47.5	**1788**	**47.5**	1788	47.5	4	**842**	**50.4**	844	50.3	836	50.8
465.tonto	8	945	83.3	**960**	**82.0**	960	82.0	8	**890**	**88.5**	895	87.9	889	88.6
470.lbm	8	2488	44.2	**2492**	**44.1**	2493	44.1	4	1118	49.1	**1120**	**49.1**	1120	49.1
481.wrf	8	**1008**	**88.7**	1033	86.5	1008	88.7	8	**1008**	**88.7**	1033	86.5	1008	88.7
482.sphinx3	8	1892	82.4	**1896**	**82.2**	1898	82.2	8	**1754**	**88.9**	1749	89.1	1756	88.8

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 1067 MHz.
    BIOS configuration:
    Data Reuse Optimization = Disable
    Performance/Power Setting = Traditional

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Test sponsor: Fujitsu	**Hardware Availability:** Jun-2010
Tested by: Fujitsu	**Software Availability:** Jan-2010

General Notes

For information about Fujitsu please visit: http://www.fujitsu.com
Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502

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: basepeak = yes

    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.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

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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