SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

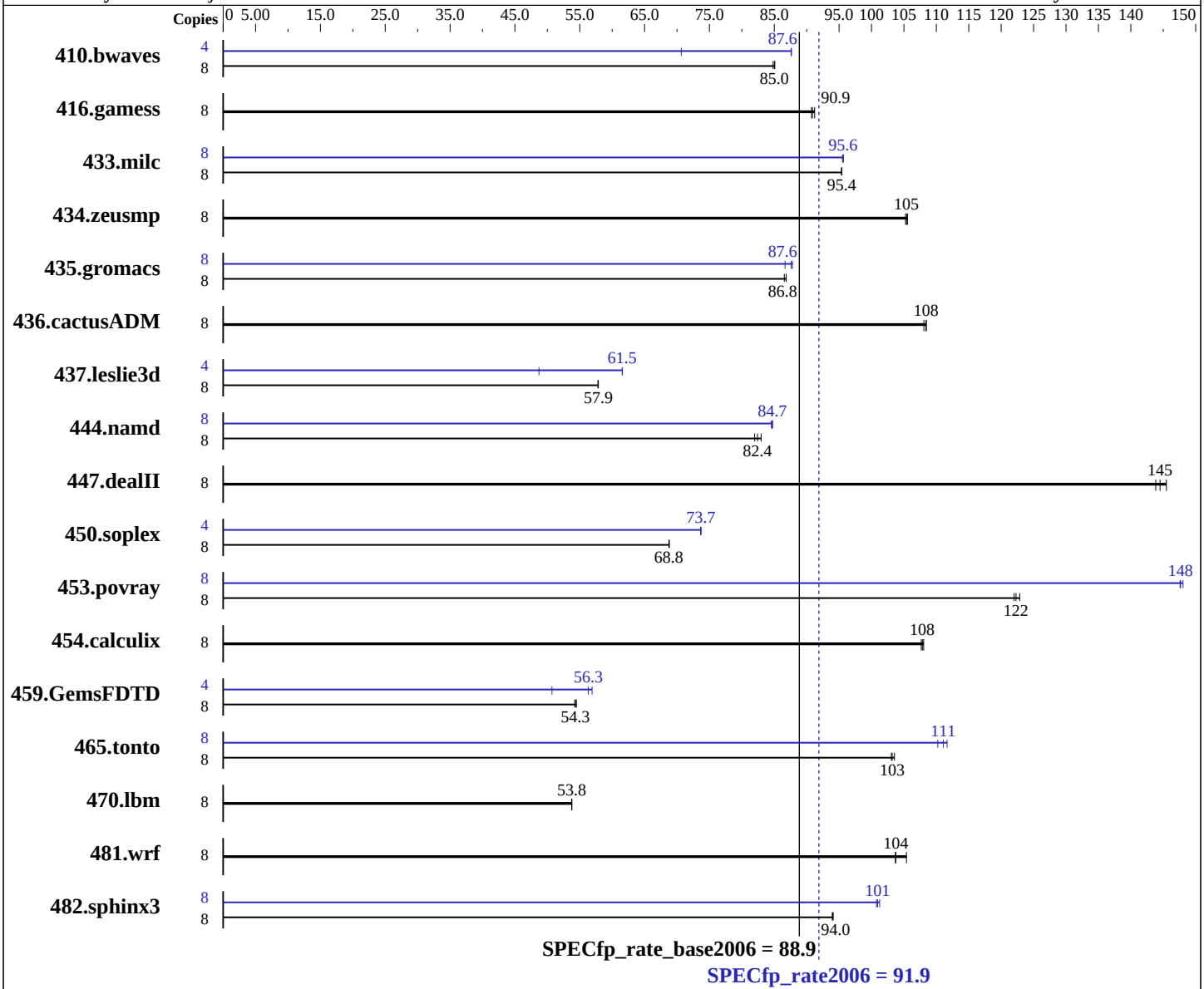
PRIMERGY BX922 S2, Intel Xeon E5640, 2.67 GHz

SPECfp®_rate2006 = 91.9

SPECfp_rate_base2006 = 88.9

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

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



Hardware

CPU Name:	Intel Xeon E5640
CPU Characteristics:	Intel Turbo Boost Technology up to 2.93 GHz
CPU MHz:	2667
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

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

Continued on next page

SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY BX922 S2, Intel Xeon E5640, 2.67 GHz

SPECfp_rate2006 = 91.9

SPECfp_rate_base2006 = 88.9

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

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

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 SSD, 64 GB
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	1278	85.1	**1279**	**85.0**	1282	84.8	4	**621**	**87.6**	769	70.7	620	87.7
416.gamess	8	1726	90.8	1717	91.2	**1724**	**90.9**	8	1726	90.8	1717	91.2	**1724**	**90.9**
433.milc	8	770	95.4	**770**	**95.4**	770	95.4	8	**768**	**95.6**	769	95.5	768	95.7
434.zeusmp	8	692	105	690	106	**691**	**105**	8	692	105	690	106	**691**	**105**
435.gromacs	8	660	86.6	658	86.8	**658**	**86.8**	8	659	86.7	650	87.8	**652**	**87.6**
436.cactusADM	8	885	108	881	108	**882**	**108**	8	885	108	881	108	**882**	**108**
437.leslie3d	8	**1300**	**57.9**	1299	57.9	1301	57.8	4	**611**	**61.5**	772	48.7	610	61.6
444.namd	8	773	83.0	**778**	**82.4**	783	82.0	8	759	84.5	**757**	**84.7**	757	84.8
447.dealII	8	**633**	**145**	636	144	629	145	8	**633**	**145**	636	144	629	145
450.soplex	8	970	68.7	969	68.8	**970**	**68.8**	4	453	73.6	453	73.7	**453**	**73.7**
453.povray	8	346	123	349	122	**348**	**122**	8	**288**	**148**	287	148	288	148
454.calculix	8	611	108	**612**	**108**	613	108	8	611	108	**612**	**108**	613	108
459.GemsFDTD	8	1565	54.2	1558	54.5	**1562**	**54.3**	4	**754**	**56.3**	837	50.7	746	56.9
465.tonto	8	764	103	760	104	**763**	**103**	8	714	110	705	112	**709**	**111**
470.lbm	8	2045	53.8	**2044**	**53.8**	2044	53.8	8	2045	53.8	**2044**	**53.8**	2044	53.8
481.wrf	8	**861**	**104**	862	104	848	105	8	**861**	**104**	862	104	848	105
482.sphinx3	8	**1658**	**94.0**	1657	94.1	1660	93.9	8	1540	101	**1545**	**101**	1547	101

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

Platform Notes

```
The system automatically configures the memory to run at 1066 MHz.
BIOS configuration:
Data Reuse Optimization = Disabled
Turbo Boost Technology: Performance/Power Setting = Traditional
```

General Notes

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

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

Continued on next page

Base Optimization Flags (Continued)

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`

Peak Optimization Flags

C benchmarks:

Continued on next page

Peak Optimization Flags (Continued)

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: basepeak = yes

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

436.cactusADM: basepeak = yes

Continued on next page

Peak Optimization Flags (Continued)

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`

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 09:25:00 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 25 May 2010.