



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu Siemens Computers

### SPECfp<sup>®</sup>\_rate2006 = 83.2

PRIMERGY RX300 S4, Intel Xeon X5470, 3.33 GHz

### SPECfp\_rate\_base2006 = 76.4

CPU2006 license: 22

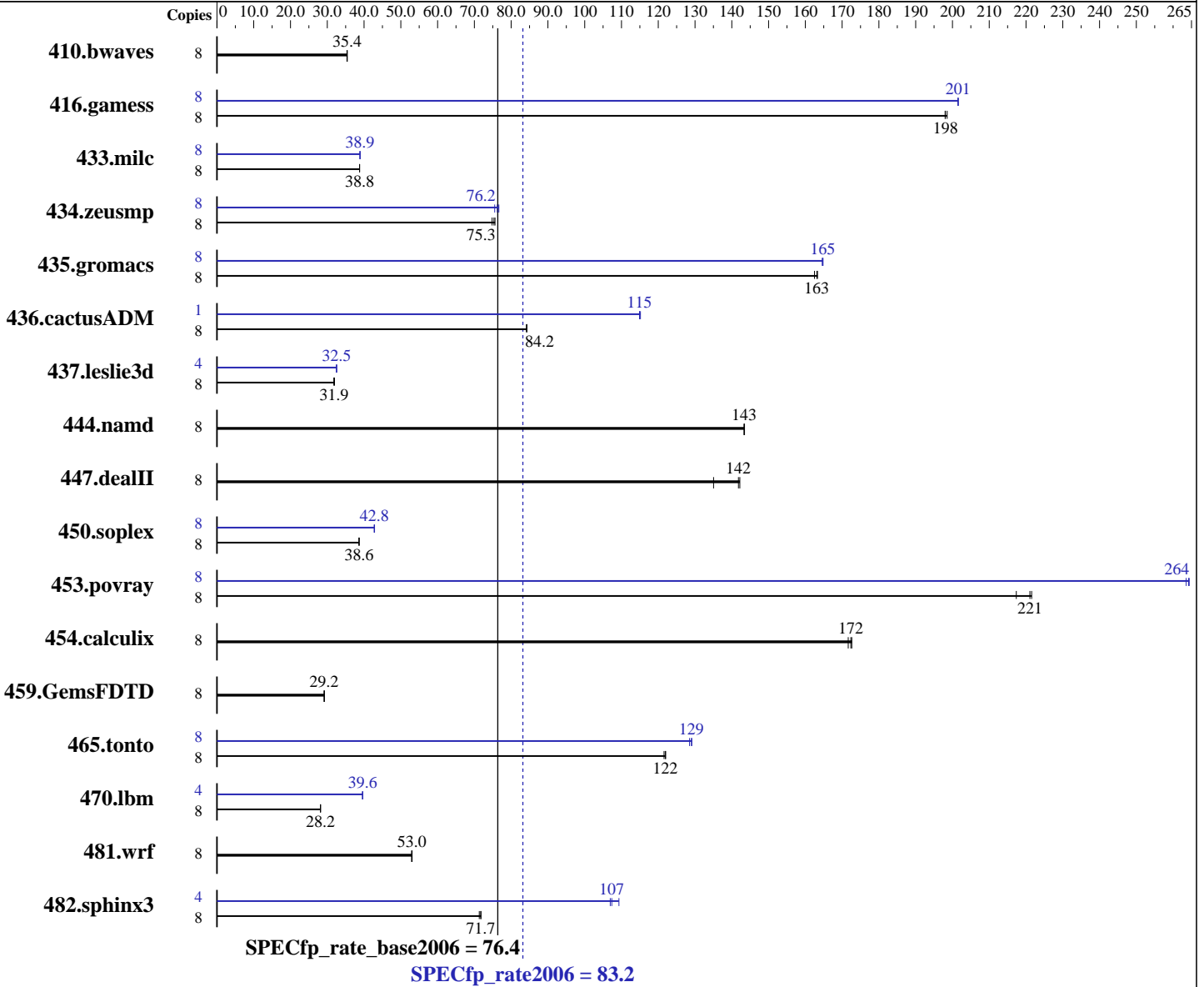
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Sep-2008

Hardware Availability: Sep-2008

Software Availability: Nov-2008



### Hardware

CPU Name: Intel Xeon X5470  
 CPU Characteristics: 1333 MHz system bus  
 CPU MHz: 3333  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 12 MB I+D on chip per chip, 6 MB shared / 2 cores

Continued on next page

### Software

Operating System: SUSE Linux Enterprise Server 10 (x86\_64) SP2, Kernel 2.6.16.60-0.21-smp  
 Compiler: Intel C++ and Fortran Compiler 11.0 for Linux Build 20080730 Package ID: l\_cproc\_b\_11.0.042, l\_fproc\_b\_11.0.042  
 Auto Parallel: Yes  
 File System: ext3  
 System State: Multi-User Run Level 3  
 Base Pointers: 64-bit

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu Siemens Computers

SPECfp\_rate2006 = **83.2**

PRIMERGY RX300 S4, Intel Xeon X5470, 3.33 GHz

SPECfp\_rate\_base2006 = 76.4

CPU2006 license: 22

Test date: Sep-2008

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Sep-2008

Tested by: Fujitsu Siemens Computers

Software Availability: Nov-2008

L3 Cache: None  
Other Cache: None  
Memory: 16 GB (8x2 GB PC2-5300F, 2 rank, CL5-5-5, ECC)  
Disk Subsystem: 1x SATA, 160 GB, 7200 rpm  
Other Hardware: None

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	3069	35.4	3076	35.3	<u>3071</u>	<u>35.4</u>	8	3069	35.4	3076	35.3	<u>3071</u>	<u>35.4</u>
416.gamess	8	791	198	789	199	<u>791</u>	<u>198</u>	8	777	202	<u>777</u>	<u>201</u>	777	201
433.milc	8	<u>1894</u>	<u>38.8</u>	1893	38.8	1894	38.8	8	1888	38.9	<u>1888</u>	<u>38.9</u>	1888	38.9
434.zeusmp	8	973	74.8	<u>966</u>	<u>75.3</u>	963	75.6	8	<u>955</u>	<u>76.2</u>	964	75.5	950	76.7
435.gromacs	8	350	163	<u>350</u>	<u>163</u>	352	162	8	<u>347</u>	<u>165</u>	347	165	347	165
436.cactusADM	8	1135	84.2	<u>1135</u>	<u>84.2</u>	1134	84.3	1	104	115	<u>104</u>	<u>115</u>	104	115
437.leslie3d	8	2352	32.0	2365	31.8	<u>2361</u>	<u>31.9</u>	4	1157	32.5	<u>1157</u>	<u>32.5</u>	1155	32.6
444.namd	8	447	143	448	143	<u>447</u>	<u>143</u>	8	447	143	448	143	<u>447</u>	<u>143</u>
447.dealII	8	644	142	<u>645</u>	<u>142</u>	678	135	8	644	142	<u>645</u>	<u>142</u>	678	135
450.soplex	8	1728	38.6	1725	38.7	<u>1727</u>	<u>38.6</u>	8	1557	42.9	1560	42.8	<u>1559</u>	<u>42.8</u>
453.povray	8	192	222	196	217	<u>193</u>	<u>221</u>	8	161	264	<u>161</u>	<u>264</u>	161	264
454.calculix	8	384	172	382	173	<u>383</u>	<u>172</u>	8	384	172	382	173	<u>383</u>	<u>172</u>
459.GemsFDTD	8	<u>2910</u>	<u>29.2</u>	2907	29.2	2911	29.2	8	<u>2910</u>	<u>29.2</u>	2907	29.2	2911	29.2
465.tonto	8	645	122	<u>645</u>	<u>122</u>	648	122	8	610	129	613	129	<u>610</u>	<u>129</u>
470.lbm	8	3905	28.1	<u>3905</u>	<u>28.2</u>	3902	28.2	4	1388	39.6	1387	39.6	<u>1388</u>	<u>39.6</u>
481.wrf	8	1688	53.0	1684	53.1	<u>1686</u>	<u>53.0</u>	8	1688	53.0	1684	53.1	<u>1686</u>	<u>53.0</u>
482.sphinx3	8	<u>2174</u>	<u>71.7</u>	2172	71.8	2186	71.3	4	729	107	713	109	<u>726</u>	<u>107</u>

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

## Compiler Invocation Notes

All binaries were built with 64-bit mode except:  
437.leslie3d, 450.soplex and 482.sphinx3 in peak  
were built with 32-bit mode.

## Submit Notes

The config file option 'submit' was used.  
taskset has been used to bind processes to cores except  
for 436.cactusADM peak



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu Siemens Computers

SPECfp\_rate2006 = 83.2

PRIMERGY RX300 S4, Intel Xeon X5470, 3.33 GHz

SPECfp\_rate\_base2006 = 76.4

CPU2006 license: 22

Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Sep-2008

Hardware Availability: Sep-2008

Software Availability: Nov-2008

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run  
OMP\_NUM\_THREADS set to number of cores (default)  
KMP\_AFFINITY set to "physical,0"  
KMP\_STACKSIZE set to 64M

## Platform Notes

BIOS configuration:  
Hardware Prefetch = Disable, Adjacent Sector Prefetch = Disable  
Memory Throttling = Enable

## General Notes

For information about Fujitsu Siemens Computers please see:  
<http://www.fujitsu-siemens.com>

## Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icc ifort

## 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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu Siemens Computers

SPECfp\_rate2006 = 83.2

PRIMERGY RX300 S4, Intel Xeon X5470, 3.33 GHz

SPECfp\_rate\_base2006 = 76.4

CPU2006 license: 22

Test date: Sep-2008

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Sep-2008

Tested by: Fujitsu Siemens Computers

Software Availability: Nov-2008

## Base Portability Flags (Continued)

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:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

C++ benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

Fortran benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

Benchmarks using both Fortran and C:

-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc

482.sphinx3: /opt/intel/Compiler/11.0/042/bin/ia32/icc  
 -L/opt/intel/Compiler/11.0/042/ipp/ia32/lib  
 -I/opt/intel/Compiler/11.0/042/ipp/ia32/include

C++ benchmarks (except as noted below):

icpc

450.soplex: /opt/intel/Compiler/11.0/042/bin/ia32/icpc  
 -L/opt/intel/Compiler/11.0/042/ipp/ia32/lib  
 -I/opt/intel/Compiler/11.0/042/ipp/ia32/include

Fortran benchmarks (except as noted below):

ifort

437.leslie3d: /opt/intel/Compiler/11.0/042/bin/ia32/ifort  
 -L/opt/intel/Compiler/11.0/042/ipp/ia32/lib  
 -I/opt/intel/Compiler/11.0/042/ipp/ia32/include

Benchmarks using both Fortran and C:

icc ifort



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu Siemens Computers

SPECfp\_rate2006 = 83.2

PRIMERGY RX300 S4, Intel Xeon X5470, 3.33 GHz

SPECfp\_rate\_base2006 = 76.4

CPU2006 license: 22

Test date: Sep-2008

Test sponsor: Fujitsu Siemens Computers

Hardware Availability: Sep-2008

Tested by: Fujitsu Siemens Computers

Software Availability: Nov-2008

## 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
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:

```

433.milc: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
         -no-prec-div -static -fno-alias

```

```

470.lbm: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch
         -auto-ilp32

```

```

482.sphinx3: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2

```

C++ benchmarks:

```

444.namd: basepeak = yes

```

```

447.dealII: basepeak = yes

```

```

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

```

```

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

```

Fortran benchmarks:

```

410.bwaves: basepeak = yes

```

```

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
         -no-prec-div -static -unroll2 -Ob0 -ansi-alias
         -scalar-rep-

```

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu Siemens Computers

SPECfp\_rate2006 = 83.2

PRIMERGY RX300 S4, Intel Xeon X5470, 3.33 GHz

SPECfp\_rate\_base2006 = 76.4

CPU2006 license: 22

Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Sep-2008

Hardware Availability: Sep-2008

Software Availability: Nov-2008

## Peak Optimization Flags (Continued)

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static

437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -opt-malloc-options=3 -opt-prefetch

459.GemsFDTD: basepeak = yes

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll4 -auto

Benchmarks using both Fortran and C:

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

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll2 -opt-prefetch -parallel  
-auto-ilp32

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-ic11.0-fp-linux64-revA.20090713.08.html>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.00.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090713.08.xml>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.00.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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.1.

Report generated on Tue Jul 22 20:54:06 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 1 October 2008.