



# SPEC® CFP2006 Result

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## Fujitsu Siemens Computers

### SPECfp®\_rate2006 = 68.4

### PRIMERGY RX300 S4, Intel Xeon L5410, 2.33 GHz

### SPECfp\_rate\_base2006 = 62.2

CPU2006 license: 22

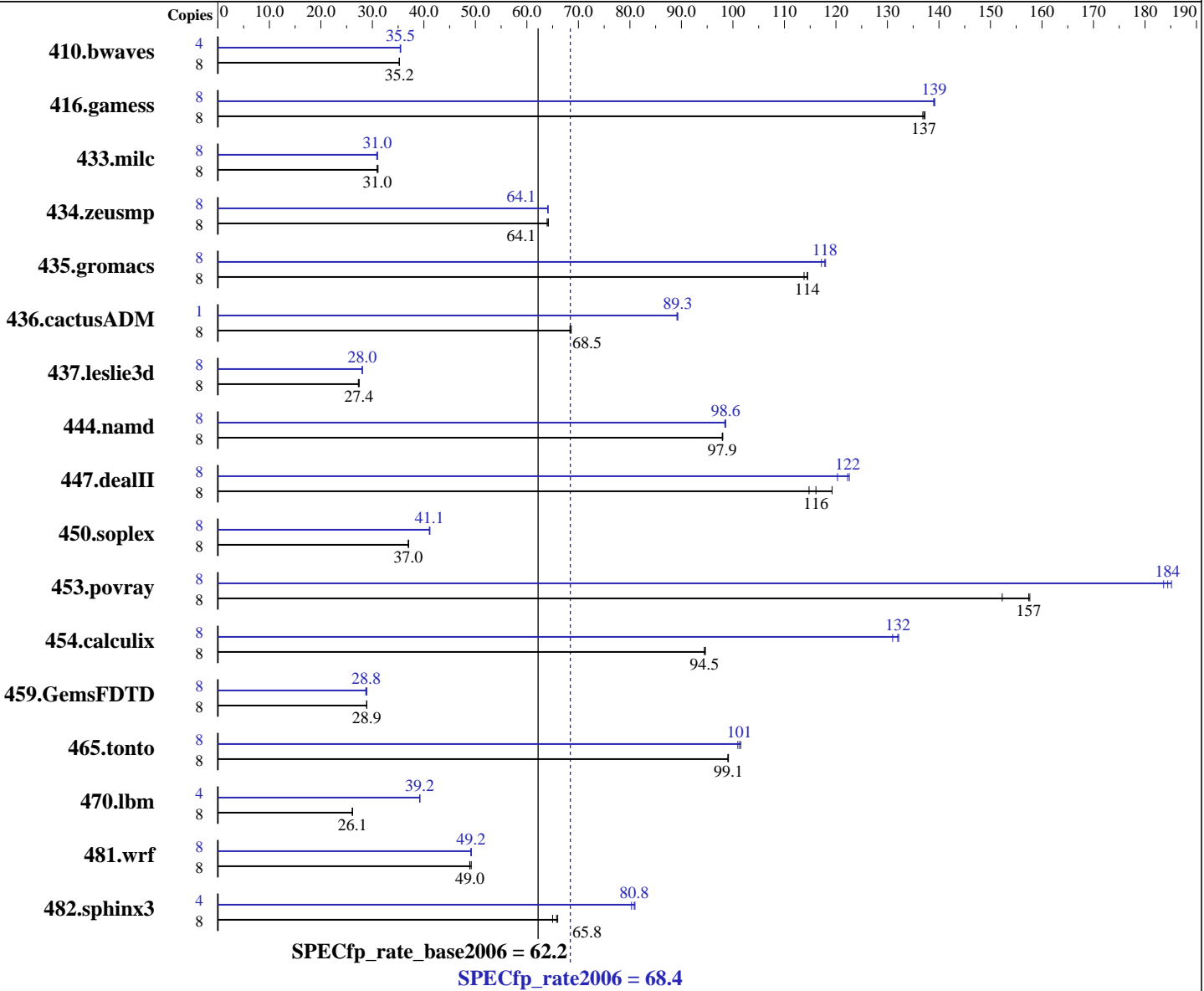
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Feb-2008

Hardware Availability: Mar-2008

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Xeon L5410  
 CPU Characteristics: 1333 MHz system bus  
 CPU MHz: 2333  
 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

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### Software

Operating System: SUSE Linux Enterprise Server 10 (x86\_64) SP1, Kernel 2.6.16.46-0.12-smp  
 Compiler: Intel C++ and Fortran Compiler for Linux32 and Linux64 Version 10.1 - Build 20070725  
 Auto Parallel: Yes  
 File System: ext2  
 System State: Multi-User Run Level 3  
 Base Pointers: 64-bit

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L3 Cache: None  
Other Cache: None  
Memory: 16 GB (8x2 GB PC2-5300F, 2 rank, CL 5-5-5, ECC)  
Disk Subsystem: 1x SAS, 73 GB, 15000 rpm  
Other Hardware: None

Peak Pointers: 32/64-bit  
Other Software: binutils-2.17.50.0.5-0.1.x86\_64

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	<b>3085</b>	<b>35.2</b>	3085	35.2	3086	35.2	4	1536	35.4	<b>1533</b>	<b>35.5</b>	1531	35.5
416.gamess	8	1141	137	<b>1143</b>	<b>137</b>	1144	137	8	<b>1127</b>	<b>139</b>	1127	139	1125	139
433.milc	8	2361	31.1	<b>2372</b>	<b>31.0</b>	2374	30.9	8	2381	30.8	2369	31.0	<b>2371</b>	<b>31.0</b>
434.zeusmp	8	1134	64.2	<b>1136</b>	<b>64.1</b>	1139	63.9	8	<b>1136</b>	<b>64.1</b>	1136	64.1	1136	64.1
435.gromacs	8	499	115	502	114	<b>499</b>	<b>114</b>	8	484	118	487	117	<b>485</b>	<b>118</b>
436.cactusADM	8	<b>1396</b>	<b>68.5</b>	1399	68.4	1393	68.6	1	<b>134</b>	<b>89.3</b>	134	89.1	134	89.3
437.leslie3d	8	2757	27.3	2743	27.4	<b>2744</b>	<b>27.4</b>	8	2680	28.1	<b>2682</b>	<b>28.0</b>	2683	28.0
444.namd	8	654	98.0	<b>655</b>	<b>97.9</b>	655	97.9	8	651	98.6	652	98.4	<b>651</b>	<b>98.6</b>
447.dealII	8	767	119	<b>788</b>	<b>116</b>	797	115	8	746	123	<b>748</b>	<b>122</b>	761	120
450.soplex	8	1802	37.0	1804	37.0	<b>1804</b>	<b>37.0</b>	8	1624	41.1	1620	41.2	<b>1624</b>	<b>41.1</b>
453.povray	8	270	158	<b>270</b>	<b>157</b>	279	152	8	232	184	230	185	<b>231</b>	<b>184</b>
454.calculix	8	699	94.5	<b>698</b>	<b>94.5</b>	697	94.7	8	499	132	<b>500</b>	<b>132</b>	504	131
459.GemsFDTD	8	<b>2936</b>	<b>28.9</b>	2936	28.9	2936	28.9	8	2955	28.7	2934	28.9	<b>2945</b>	<b>28.8</b>
465.tonto	8	795	99.0	<b>794</b>	<b>99.1</b>	794	99.1	8	775	102	<b>777</b>	<b>101</b>	780	101
470.lbm	8	4208	26.1	<b>4207</b>	<b>26.1</b>	4206	26.1	4	<b>1402</b>	<b>39.2</b>	1403	39.2	1401	39.2
481.wrf	8	<b>1826</b>	<b>49.0</b>	1816	49.2	1828	48.9	8	1816	49.2	1819	49.1	<b>1817</b>	<b>49.2</b>
482.sphinx3	8	<b>2371</b>	<b>65.8</b>	2363	66.0	2399	65.0	4	971	80.3	<b>964</b>	<b>80.8</b>	963	81.0

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  
OMP\_NUM\_THREADS set to number of cores (default)

## Platform Notes

BIOS configuration:  
Hardware Prefetch = Disable, Adjacent Sector Prefetch = Disable

## General Notes

All binaries were built with 64-bit Intel compiler except:  
437.leslie3d, 450.soplex, 470.lbm, and 482.sphinx3 in peak  
were built with 32-bit Intel compiler by changing

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## General Notes (Continued)

the path for include and library files.

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.deallI: -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:  
-fast

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## Base Optimization Flags (Continued)

C++ benchmarks:

-fast

Fortran benchmarks:

-fast

Benchmarks using both Fortran and C:

-fast

## Peak Compiler Invocation

C benchmarks (except as noted below):

/opt/intel/cc/10.1.008/bin/icc -L/opt/intel/cc/10.1.008/lib  
-I/opt/intel/cc/10.1.008/include

433.milc: icc

C++ benchmarks (except as noted below):

icpc

450.soplex: /opt/intel/cc/10.1.008/bin/icpc -L/opt/intel/cc/10.1.008/lib  
-I/opt/intel/cc/10.1.008/include

Fortran benchmarks (except as noted below):

ifort

437.leslie3d: /opt/intel/fc/10.1.008/bin/ifort -L/opt/intel/fc/10.1.008/lib  
-I/opt/intel/fc/10.1.008/include

Benchmarks using both Fortran and C:

icc ifort

## 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

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## Peak Portability Flags (Continued)

465.tonto: -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) -fast -fno-alias  
-auto-ilp32

470.lbm: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-scalar-rep- -prefetch -opt-malloc-options=3

482.sphinx3: -fast -unroll2

C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias  
-auto-ilp32

447.dealII: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-ansi-alias -scalar-rep-

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -fast  
-opt-malloc-options=3

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4  
-ansi-alias

Fortran benchmarks:

410.bwaves: -fast -prefetch

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0  
-ansi-alias -scalar-rep-

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -fast

437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch  
-opt-malloc-options=3

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -Ob0  
-prefetch

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -auto

Benchmarks using both Fortran and C:

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## Peak Optimization Flags (Continued)

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch  
-auto-ilp32

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-prefetch -parallel -auto-ilp32

454.calculix: -fast -unroll-aggressive -auto-ilp32

481.wrf: -fast -auto-ilp32

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/flags-ic101-linux-intel64.20090713.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/flags-ic101-linux-intel64.20090713.xml>

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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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