



SPEC[®] CFP2006 Result

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Fujitsu Siemens Computers

SPECfp[®]_rate2006 = 43.1

PRIMERGY RX200 S4, Intel Xeon E5430, 2.66 GHz

SPECfp_rate_base2006 = 38.0

CPU2006 license: 22

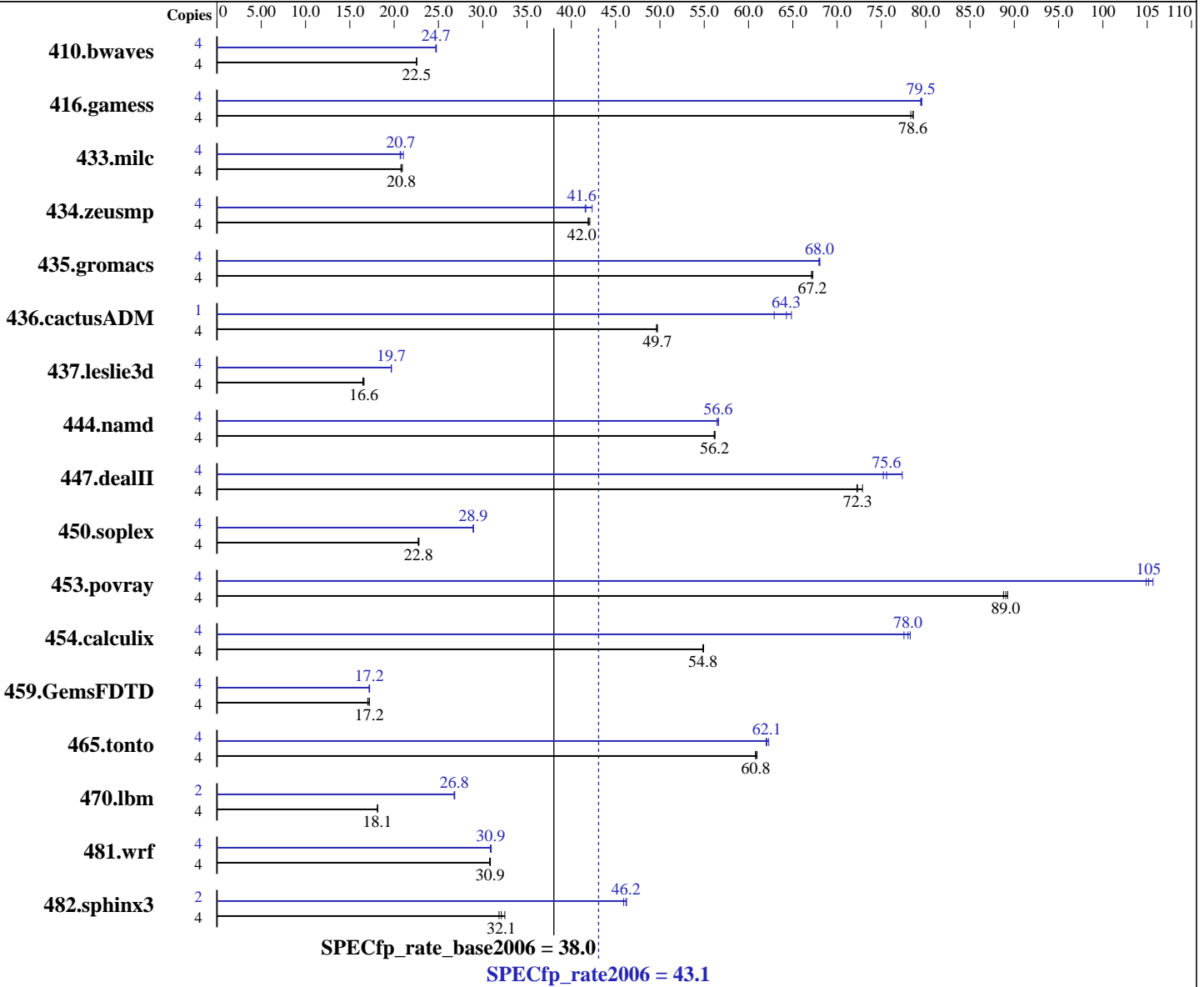
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Sep-2008

Hardware Availability: Dec-2007

Software Availability: May-2008



Hardware

CPU Name: Intel Xeon E5430
 CPU Characteristics: 1333 MHz system bus
 CPU MHz: 2667
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 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) with SP2, kernel 2.6.16.60-0.21-smp
 Compiler: Intel C++ and Fortran Compiler for Linux32 and Linux64 Version 10.1 - Build 20070913
 Auto Parallel: Yes
 File System: ext3
 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	4	2412	22.5	2410	22.6	<u>2411</u>	<u>22.5</u>	4	2194	24.8	2201	24.7	<u>2197</u>	<u>24.7</u>
416.gamess	4	<u>997</u>	<u>78.6</u>	996	78.6	1000	78.3	4	986	79.4	984	79.6	<u>986</u>	<u>79.5</u>
433.milc	4	1755	20.9	<u>1763</u>	<u>20.8</u>	1768	20.8	4	1775	20.7	1745	21.0	<u>1770</u>	<u>20.7</u>
434.zeusmp	4	<u>868</u>	<u>42.0</u>	869	41.9	865	42.1	4	876	41.6	<u>874</u>	<u>41.6</u>	859	42.4
435.gromacs	4	425	67.3	<u>425</u>	<u>67.2</u>	426	67.1	4	420	68.1	420	67.9	<u>420</u>	<u>68.0</u>
436.cactusADM	4	<u>962</u>	<u>49.7</u>	962	49.7	963	49.6	1	184	64.8	190	62.9	<u>186</u>	<u>64.3</u>
437.leslie3d	4	2266	16.6	<u>2268</u>	<u>16.6</u>	2284	16.5	4	1909	19.7	1912	19.7	<u>1911</u>	<u>19.7</u>
444.namd	4	572	56.1	<u>571</u>	<u>56.2</u>	571	56.2	4	568	56.4	<u>567</u>	<u>56.6</u>	567	56.6
447.dealII	4	628	72.9	<u>633</u>	<u>72.3</u>	634	72.2	4	<u>605</u>	<u>75.6</u>	592	77.4	608	75.2
450.soplex	4	1469	22.7	<u>1466</u>	<u>22.8</u>	1463	22.8	4	1152	29.0	1154	28.9	<u>1152</u>	<u>28.9</u>
453.povray	4	238	89.3	<u>239</u>	<u>89.0</u>	240	88.8	4	201	106	<u>202</u>	<u>105</u>	203	105
454.calculix	4	601	54.9	<u>602</u>	<u>54.8</u>	602	54.8	4	<u>423</u>	<u>78.0</u>	426	77.5	422	78.3
459.GemsFDTD	4	<u>2469</u>	<u>17.2</u>	2467	17.2	2494	17.0	4	2469	17.2	<u>2469</u>	<u>17.2</u>	2462	17.2
465.tonto	4	646	61.0	<u>647</u>	<u>60.8</u>	648	60.8	4	632	62.3	635	62.0	<u>634</u>	<u>62.1</u>
470.lbm	4	3033	18.1	<u>3032</u>	<u>18.1</u>	3031	18.1	2	<u>1025</u>	<u>26.8</u>	1024	26.8	1026	26.8
481.wrf	4	1447	30.9	1452	30.8	<u>1448</u>	<u>30.9</u>	4	1448	30.9	1443	31.0	<u>1445</u>	<u>30.9</u>
482.sphinx3	4	2448	31.8	<u>2428</u>	<u>32.1</u>	2399	32.5	2	849	45.9	843	46.2	<u>844</u>	<u>46.2</u>

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

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



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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
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

C++ benchmarks:

-fast

Fortran benchmarks:

-fast

Benchmarks using both Fortran and C:

-fast



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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.deall: -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
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
```

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Peak Optimization Flags (Continued)

482.sphinx3: -fast -unroll2

C++ benchmarks:

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

447.dealIII: -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:

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.html>



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

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

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For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.
Report generated on Tue Jul 22 22:14:41 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 14 October 2008.