



SPEC® CFP2006 Result

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Fujitsu Siemens Computers

SPECfp®_rate2006 = 40.4

PRIMERGY RX200 S4, Intel Xeon L5410, 2.33 GHz

SPECfp_rate_base2006 = 35.9

CPU2006 license: 22

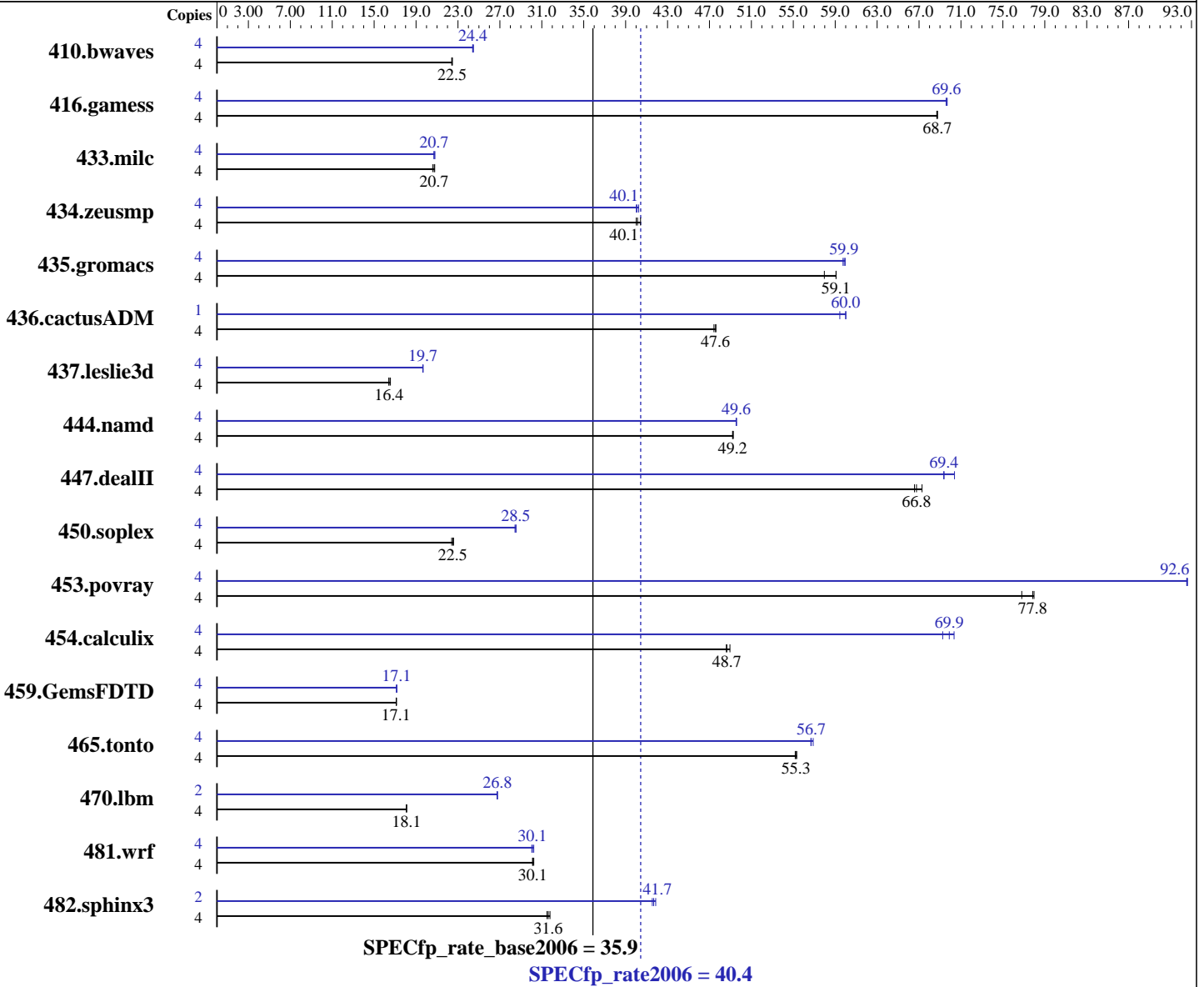
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Sep-2008

Hardware Availability: Dec-2007

Software Availability: May-2008



Hardware

CPU Name: Intel Xeon L5410
 CPU Characteristics: 1333 MHz system bus
 CPU MHz: 2333
 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	2421	22.5	<u>2421</u>	<u>22.5</u>	2426	22.4	4	<u>2225</u>	<u>24.4</u>	2228	24.4	2221	24.5
416.gamess	4	1139	68.8	<u>1139</u>	<u>68.7</u>	1140	68.7	4	1124	69.7	<u>1125</u>	<u>69.6</u>	1126	69.6
433.milc	4	1783	20.6	<u>1772</u>	<u>20.7</u>	1767	20.8	4	1773	20.7	1765	20.8	<u>1771</u>	<u>20.7</u>
434.zeusmp	4	910	40.0	<u>907</u>	<u>40.1</u>	900	40.4	4	909	40.0	<u>908</u>	<u>40.1</u>	904	40.2
435.gromacs	4	483	59.1	493	58.0	<u>483</u>	<u>59.1</u>	4	476	60.0	478	59.7	<u>477</u>	<u>59.9</u>
436.cactusADM	4	<u>1005</u>	<u>47.6</u>	1004	47.6	1008	47.4	1	201	59.4	<u>199</u>	<u>60.0</u>	199	60.0
437.leslie3d	4	<u>2290</u>	<u>16.4</u>	2271	16.6	2292	16.4	4	<u>1913</u>	<u>19.7</u>	1914	19.6	1911	19.7
444.namd	4	651	49.3	<u>652</u>	<u>49.2</u>	652	49.2	4	647	49.6	<u>647</u>	<u>49.6</u>	648	49.5
447.dealII	4	680	67.3	<u>685</u>	<u>66.8</u>	687	66.6	4	660	69.4	<u>659</u>	<u>69.4</u>	650	70.4
450.soplex	4	<u>1482</u>	<u>22.5</u>	1489	22.4	1478	22.6	4	<u>1170</u>	<u>28.5</u>	1173	28.4	1169	28.5
453.povray	4	277	76.8	<u>273</u>	<u>77.8</u>	273	78.0	4	230	92.6	<u>230</u>	<u>92.6</u>	230	92.5
454.calculix	4	674	49.0	679	48.6	<u>678</u>	<u>48.7</u>	4	476	69.3	<u>472</u>	<u>69.9</u>	469	70.3
459.GemsFDTD	4	2476	17.1	<u>2481</u>	<u>17.1</u>	2482	17.1	4	<u>2477</u>	<u>17.1</u>	2472	17.2	2477	17.1
465.tonto	4	713	55.2	<u>712</u>	<u>55.3</u>	711	55.3	4	692	56.9	<u>694</u>	<u>56.7</u>	694	56.7
470.lbm	4	3039	18.1	<u>3038</u>	<u>18.1</u>	3037	18.1	2	1027	26.8	<u>1027</u>	<u>26.8</u>	1028	26.7
481.wrf	4	1478	30.2	<u>1483</u>	<u>30.1</u>	1483	30.1	4	1487	30.0	<u>1484</u>	<u>30.1</u>	1478	30.2
482.sphinx3	4	2475	31.5	<u>2466</u>	<u>31.6</u>	2453	31.8	2	931	41.9	938	41.5	<u>935</u>	<u>41.7</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.deallI: -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.

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