SPEC® CFP2006 Result
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Fujitsu Siemens Computers

PRIMERGY RX200 S4, Intel Xeon processor 5148, 2.33 GHz

$SPECfp^{®}\_rate2006 =$ 43.8

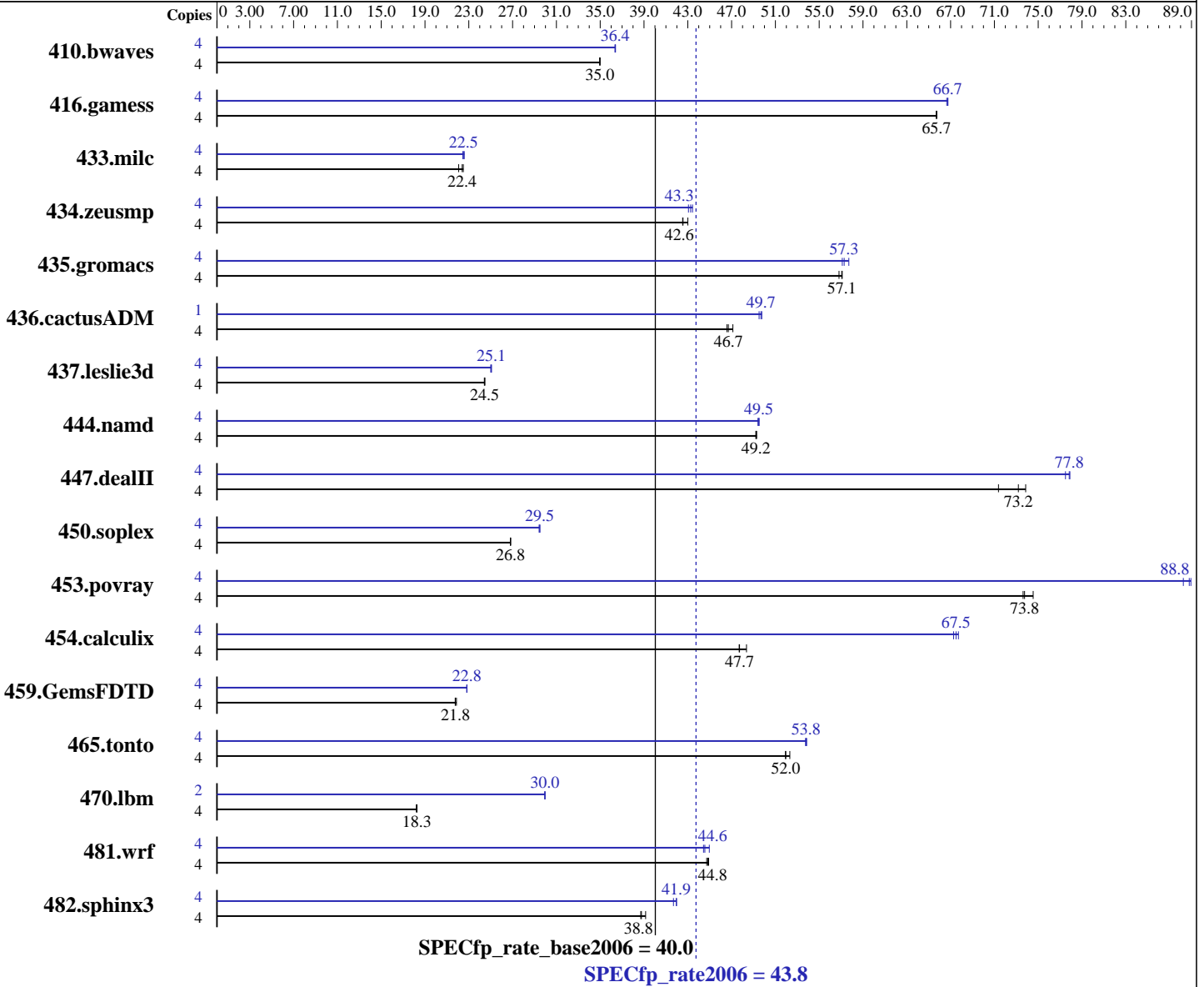$SPECfp\_rate\_base2006 =$ 40.0

CPU2006 license: 22
Test sponsor: Fujitsu Siemens Computers
Tested by: Fujitsu Siemens Computers

Test date: Nov-2007
Hardware Availability: Dec-2007
Software Availability: Nov-2007

	Copies	
410.bwaves	4	36.4
	4	35.0
416.gamess	4	66.7
	4	65.7
433.milc	4	22.5
	4	22.4
434.zeusmp	4	43.3
	4	42.6
435.gromacs	4	57.3
	4	57.1
436.cactusADM	1	49.7
	4	46.7
437.leslie3d	4	25.1
	4	24.5
444.namd	4	49.5
	4	49.2
447.dealII	4	77.8
	4	73.2
450.soplex	4	29.5
	4	26.8
453.povray	4	88.8
	4	73.8
454.calculix	4	67.5
	4	47.7
459.GemsFDTD	4	22.8
	4	21.8
465.tonto	4	53.8
	4	52.0
470.lbm	2	30.0
	4	18.3
481.wrf	4	44.6
	4	44.8
482.sphinx3	4	41.9
	4	38.8

SPECfp_rate_base2006 = 40.0
SPECfp_rate2006 = 43.8

Hardware

CPU Name: Intel Xeon 5148
CPU Characteristics: 1333 MHz system bus
CPU MHz: 2333
FPU: Integrated
CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
CPU(s) orderable: 1,2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 4 MB I+D on chip per chip

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: Multiuser, Runlevel 3
Base Pointers: 64-bit

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L3 Cache:	None
Other Cache:	None
Memory:	16 GB (8x2 GB PC2-5300F, 2 rank, CAS 5-5-5, with ECC)
Disk Subsystem:	Seagate ST973451SS (SAS, 73GB, 15000rpm)
Other Hardware:	None
Peak Pointers:	32/64-bit
Other Software:	None

Results Table

Benchmark	Base Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Peak Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	1555	35.0	1554	35.0	**1554**	**35.0**	4	1496	36.3	**1494**	**36.4**	1493	36.4
416.gamess	4	1192	65.7	**1192**	**65.7**	1191	65.7	4	**1174**	**66.7**	1175	66.6	1173	66.8
433.milc	4	1664	22.1	**1640**	**22.4**	1632	22.5	4	1635	22.5	**1631**	**22.5**	1626	22.6
434.zeusmp	4	856	42.5	846	43.0	**855**	**42.6**	4	**841**	**43.3**	845	43.1	838	43.4
435.gromacs	4	500	57.1	**501**	**57.1**	503	56.8	4	495	57.7	**499**	**57.3**	500	57.1
436.cactusADM	4	1026	46.6	1015	47.1	**1023**	**46.7**	1	241	49.5	240	49.8	**241**	**49.7**
437.leslie3d	4	1537	24.5	1540	24.4	**1537**	**24.5**	4	1504	25.0	**1501**	**25.1**	1500	25.1
444.namd	4	652	49.2	651	49.3	**652**	**49.2**	4	648	49.5	**648**	**49.5**	649	49.4
447.dealII	4	620	73.9	641	71.4	**625**	**73.2**	4	587	77.9	591	77.5	**588**	**77.8**
450.soplex	4	1245	26.8	**1245**	**26.8**	1243	26.8	4	**1132**	**29.5**	1134	29.4	1131	29.5
453.povray	4	289	73.6	**289**	**73.8**	285	74.5	4	239	88.9	**240**	**88.8**	241	88.3
454.calculix	4	**691**	**47.7**	692	47.7	682	48.4	4	491	67.3	**489**	**67.5**	487	67.7
459.GemsFDTD	4	1950	21.8	**1948**	**21.8**	1940	21.9	4	1860	22.8	1858	22.8	**1860**	**22.8**
465.tonto	4	752	52.3	**758**	**52.0**	758	51.9	4	731	53.9	732	53.8	**732**	**53.8**
470.lbm	4	3019	18.2	**3010**	**18.3**	3008	18.3	2	918	29.9	917	30.0	**917**	**30.0**
481.wrf	4	995	44.9	**997**	**44.8**	999	44.7	4	994	45.0	**1003**	**44.6**	1005	44.4
482.sphinx3	4	**2011**	**38.8**	1991	39.1	2014	38.7	4	1870	41.7	**1859**	**41.9**	1857	42.0

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

General Notes

This result has been produced with binaries provided and compiled by Intel.

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 the path for include and library files.

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):

```
/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include
```

> 433.milc: `icc`

C++ benchmarks (except as noted below):

```
icpc
```

> 450.soplex: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icpc`
> `-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib`
> `-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include`

Fortran benchmarks (except as noted below):

```
ifort
```

> 437.leslie3d: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/ifort`
> `-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib`
> `-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/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
       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`

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Peak Optimization Flags (Continued)

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:

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`

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$SPECfp\_rate2006 = \qquad 43.8$

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The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.05.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.05.xml

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

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