SPEC® CFP2006 Result

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Fujitsu Siemens Computers

PRIMERGY TX300 S3, Intel Xeon processor 5120, 1.86 GHz

$SPECfp®\_rate2006 =$ 32.3

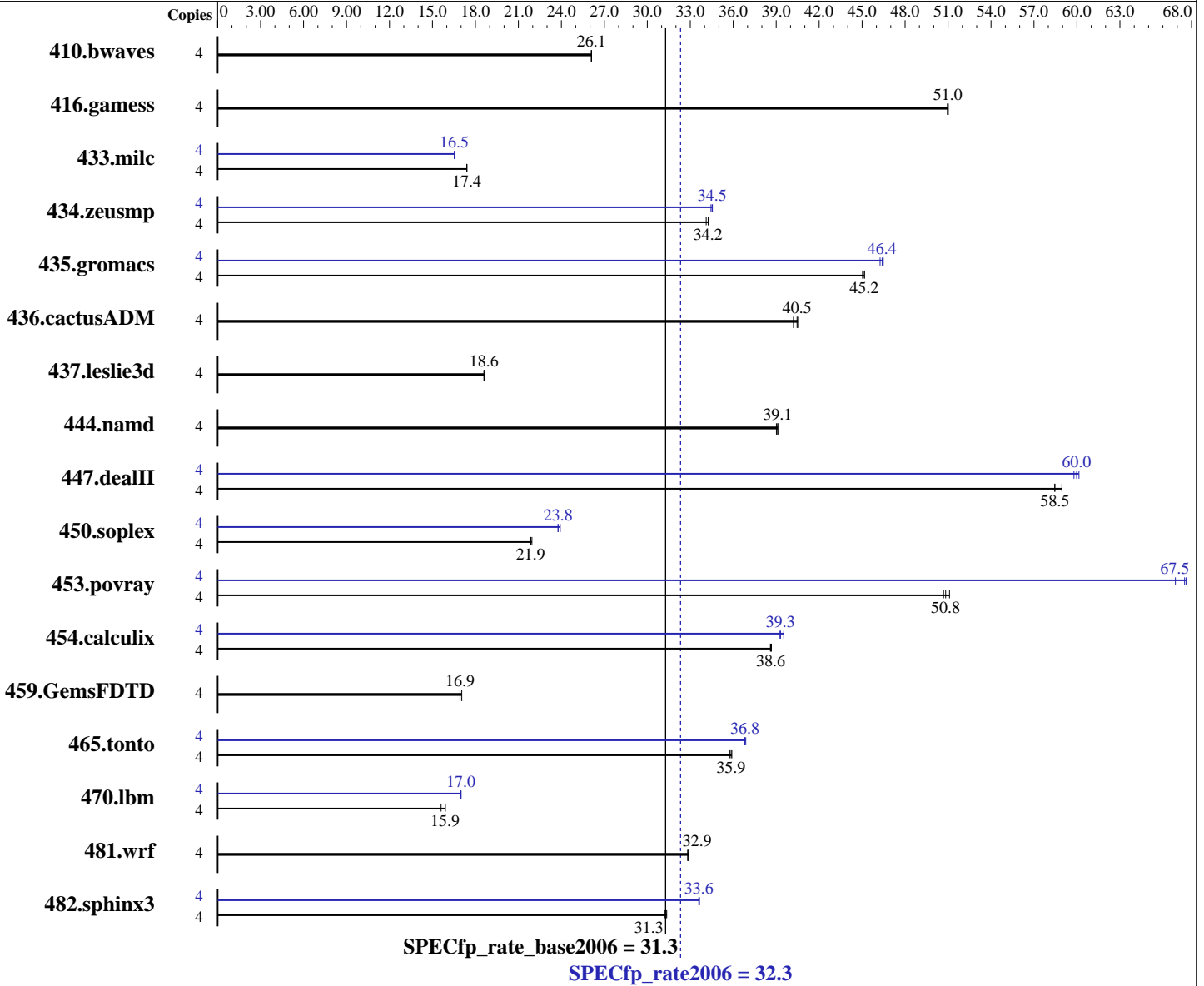$SPECfp\_rate\_base2006 =$ 31.3

CPU2006 license: 22

Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: May-2007

Hardware Availability: Jul-2006

Software Availability: Feb-2007

Copies	Benchmark	Result
4	410.bwaves	26.1
4	416.gamess	51.0
4	433.milc	16.5 / 17.4
4	434.zeusmp	34.5 / 34.2
4	435.gromacs	46.4 / 45.2
4	436.cactusADM	40.5
4	437.leslie3d	18.6
4	444.namd	39.1
4	447.dealII	60.0 / 58.5
4	450.soplex	23.8 / 21.9
4	453.povray	67.5 / 50.8
4	454.calculix	39.3 / 38.6
4	459.GemsFDTD	16.9
4	465.tonto	36.8 / 35.9
4	470.lbm	17.0 / 15.9
4	481.wrf	32.9
4	482.sphinx3	33.6 / 31.3

SPECfp_rate_base2006 = 31.3

SPECfp_rate2006 = 32.3

Hardware

CPU Name: Intel Xeon 5120
CPU Characteristics: 1067 MHz system bus
CPU MHz: 1867
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

Continued on next page

Software

Operating System: 64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp on an x86_64
Compiler: Intel C++ Compiler for IA32/EM64T application, Version 9.1 - Build 20070215, Package-ID: l_cc_p_9.1.047
Intel Fortran Compiler for IA32/EM64T application, Version 9.1 - Build 20070215, Package ID: l_fc_p_9.1.043
Auto Parallel: No
File System: ext2

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L3 Cache:	None
Other Cache:	None
Memory:	8 GB (8x1 GB DDR2 PC2-5300F, 2 rank, CAS 5-5-5, with ECC)
Disk Subsystem:	SAS (73GB 15400 rpm)
Other Hardware:	None

System State:	Multiuser, Runlevel 3
Base Pointers:	64-bit
Peak Pointers:	32/64-bit
Other Software:	None

Results Table

Benchmark	Copies	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Copies	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
410.bwaves	4	**2083**	**26.1**	2083	26.1	2083	26.1	4	**2083**	**26.1**	2083	26.1	2083	26.1
416.gamess	4	1535	51.0	**1536**	**51.0**	1537	51.0	4	1535	51.0	**1536**	**51.0**	1537	51.0
433.milc	4	**2110**	**17.4**	2110	17.4	2111	17.4	4	2221	16.5	**2221**	**16.5**	2221	16.5
434.zeusmp	4	1067	34.1	**1063**	**34.2**	1062	34.3	4	1057	34.4	**1054**	**34.5**	1054	34.5
435.gromacs	4	632	45.2	**632**	**45.2**	634	45.0	4	617	46.3	**616**	**46.4**	615	46.5
436.cactusADM	4	1180	40.5	**1182**	**40.5**	1189	40.2	4	1180	40.5	**1182**	**40.5**	1189	40.2
437.leslie3d	4	2022	18.6	**2021**	**18.6**	2018	18.6	4	2022	18.6	**2021**	**18.6**	2018	18.6
444.namd	4	**820**	**39.1**	820	39.1	822	39.0	4	**820**	**39.1**	820	39.1	822	39.0
447.dealII	4	**783**	**58.5**	783	58.5	776	59.0	4	**763**	**60.0**	761	60.1	765	59.8
450.soplex	4	1520	21.9	1526	21.9	**1526**	**21.9**	4	**1403**	**23.8**	1403	23.8	1394	23.9
453.povray	4	**419**	**50.8**	416	51.1	420	50.7	4	315	67.6	318	66.9	**315**	**67.5**
454.calculix	4	853	38.7	857	38.5	**855**	**38.6**	4	835	39.5	**840**	**39.3**	841	39.2
459.GemsFDTD	4	2489	17.0	**2507**	**16.9**	2508	16.9	4	2489	17.0	**2507**	**16.9**	2508	16.9
465.tonto	4	1101	35.8	**1098**	**35.9**	1096	35.9	4	1067	36.9	1070	36.8	**1069**	**36.8**
470.lbm	4	3456	15.9	3523	15.6	**3460**	**15.9**	4	3236	17.0	**3235**	**17.0**	3234	17.0
481.wrf	4	1359	32.9	1362	32.8	**1359**	**32.9**	4	1359	32.9	1362	32.8	**1359**	**32.9**
482.sphinx3	4	**2491**	**31.3**	2496	31.2	2486	31.4	4	**2320**	**33.6**	2317	33.6	2320	33.6

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
'/usr/bin/taskset' used to bind processes to CPUs
```

General Notes

```
The system bus runs at 1067 MHz

All binaries were built with 64-bit Intel compiler except:
433.milc, 434.zeusmp, 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.

This result was measured on the PRIMERGY RX300 S3. The PRIMERGY RX300 S3 and
```

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CPU2006 license: 22		**Test date:**	May-2007
Test sponsor:	Fujitsu Siemens Computers	**Hardware Availability:**	Jul-2006
Tested by:	Fujitsu Siemens Computers	**Software Availability:**	Feb-2007

General Notes (Continued)

the PRIMERGY TX300 S3 are electronically equivalent.

For information about Fujitsu Siemens Computers in your country please see:
http://www.fujitsu-siemens.com/countries

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

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Base Optimization Flags (Continued)

Fortran benchmarks:
```
-fast
```

Benchmarks using both Fortran and C:
```
-fast
```

Peak Compiler Invocation

C benchmarks:
```
/opt/intel/cc/9.1.047/bin/icc -I/opt/intel/cc/9.1.047/include
-L/opt/intel/cc/9.1.047/lib
```

C++ benchmarks (except as noted below):
```
icpc
```
```
  450.soplex: /opt/intel/cc/9.1.047/bin/icpc
          -I/opt/intel/cc/9.1.047/include -L/opt/intel/cc/9.1.047/lib
```

Fortran benchmarks (except as noted below):
```
ifort
```
```
  434.zeusmp: /opt/intel/fc/9.1.043/bin/ifort
          -I/opt/intel/fc/9.1.043/include -L/opt/intel/fc/9.1.043/lib
```

Benchmarks using both Fortran and C:
```
icc ifort
```

Peak Portability Flags

```
   410.bwaves: -DSPEC_CPU_LP64
   416.gamess: -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
   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
```

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Peak Optimization Flags

C benchmarks:

> 433.milc: -prof_gen(pass 1) -prof_use(pass 2) -fast

> 470.lbm: Same as 433.milc

> 482.sphinx3: -fast

C++ benchmarks:

> 444.namd: basepeak = yes

> 447.dealII: -prof_gen(pass 1) -prof_use(pass 2) -fast

> 450.soplex: Same as 447.dealII

> 453.povray: Same as 447.dealII

Fortran benchmarks:

> 410.bwaves: basepeak = yes

> 416.gamess: basepeak = yes

> 434.zeusmp: -fast

> 437.leslie3d: basepeak = yes

> 459.GemsFDTD: basepeak = yes

> 465.tonto: -prof_gen(pass 1) -prof_use(pass 2) -fast

Benchmarks using both Fortran and C:

> 435.gromacs: -prof_gen(pass 1) -prof_use(pass 2) -fast

> 436.cactusADM: basepeak = yes

> 454.calculix: Same as 435.gromacs

> 481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.09.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.09.xml

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

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