SPEC® CFP2006 Result

Fujitsu Siemens Computers

PRIMERGY TX300 S3, Intel Xeon processor E5335, 2.0 GHz

$SPECfp®\_rate2006 =$ 54.2

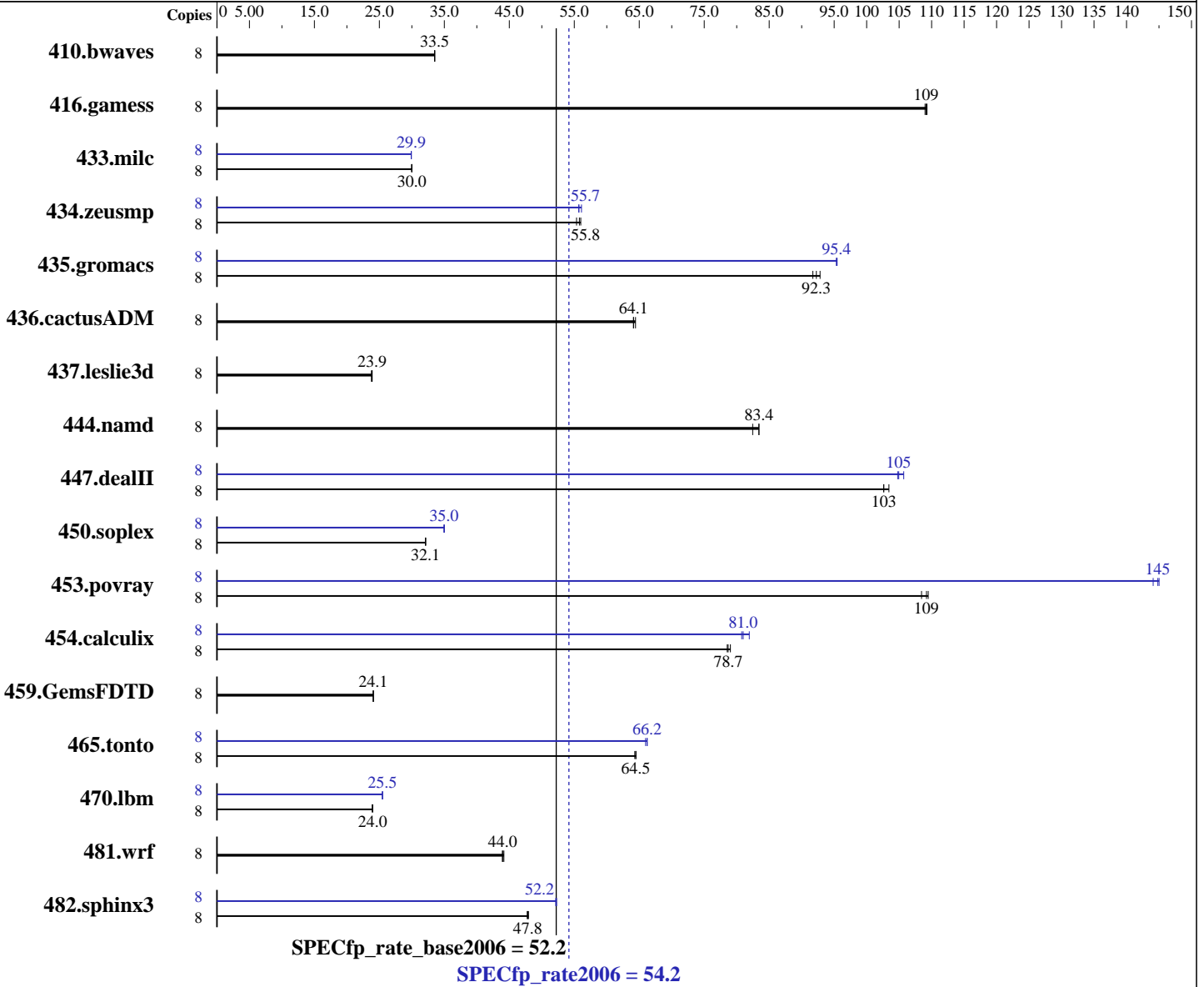SPECfp_rate_base2006 = 52.2

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

Test date: Apr-2007
Hardware Availability: Feb-2007
Software Availability: Feb-2007

Benchmark	Copies	Result
410.bwaves	8	33.5
416.gamess	8	109
433.milc	8 / 8	29.9 / 30.0
434.zeusmp	8 / 8	55.7 / 55.8
435.gromacs	8 / 8	95.4 / 92.3
436.cactusADM	8	64.1
437.leslie3d	8	23.9
444.namd	8	83.4
447.dealII	8 / 8	105 / 103
450.soplex	8 / 8	35.0 / 32.1
453.povray	8 / 8	145 / 109
454.calculix	8 / 8	81.0 / 78.7
459.GemsFDTD	8	24.1
465.tonto	8 / 8	66.2 / 64.5
470.lbm	8 / 8	25.5 / 24.0
481.wrf	8	44.0
482.sphinx3	8 / 8	52.2 / 47.8

SPECfp_rate_base2006 = 52.2
SPECfp_rate2006 = 54.2

Hardware

CPU Name: Intel Xeon E5335
CPU Characteristics: 1333 MHz system bus
CPU MHz: 2000
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: 8 MB I+D on chip per chip, 4 MB shared / 2 cores

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:	16 GB (8x2 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	Base						Peak					
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	**3245**	**33.5**	3245	33.5	3243	33.5	8	**3245**	**33.5**	3245	33.5	3243	33.5
416.gamess	8	1433	109	1437	109	**1435**	**109**	8	1433	109	1437	109	**1435**	**109**
433.milc	8	**2448**	**30.0**	2452	30.0	2447	30.0	8	2456	29.9	2455	29.9	**2455**	**29.9**
434.zeusmp	8	1315	55.3	1300	56.0	**1305**	**55.8**	8	**1306**	**55.7**	1297	56.1	1307	55.7
435.gromacs	8	**619**	**92.3**	615	92.8	623	91.7	8	598	95.5	**599**	**95.4**	599	95.3
436.cactusADM	8	**1491**	**64.1**	1484	64.4	1491	64.1	8	**1491**	**64.1**	1484	64.4	1491	64.1
437.leslie3d	8	**3150**	**23.9**	3163	23.8	3148	23.9	8	**3150**	**23.9**	3163	23.8	3148	23.9
444.namd	8	778	82.5	**769**	**83.4**	769	83.4	8	778	82.5	**769**	**83.4**	769	83.4
447.dealII	8	892	103	**892**	**103**	885	103	8	866	106	**872**	**105**	873	105
450.soplex	8	2079	32.1	2076	32.1	**2078**	**32.1**	8	1907	35.0	1909	34.9	**1907**	**35.0**
453.povray	8	392	108	**390**	**109**	389	109	8	295	144	293	145	**294**	**145**
454.calculix	8	**839**	**78.7**	835	79.0	840	78.5	8	817	80.8	**815**	**81.0**	805	81.9
459.GemsFDTD	8	**3527**	**24.1**	3527	24.1	3527	24.1	8	**3527**	**24.1**	3527	24.1	3527	24.1
465.tonto	8	1224	64.3	**1221**	**64.5**	1221	64.5	8	1189	66.2	1193	66.0	**1189**	**66.2**
470.lbm	8	**4588**	**24.0**	4588	24.0	4600	23.9	8	4315	25.5	4315	25.5	**4315**	**25.5**
481.wrf	8	**2032**	**44.0**	2034	43.9	2023	44.2	8	**2032**	**44.0**	2034	43.9	2023	44.2
482.sphinx3	8	3266	47.7	3251	48.0	**3259**	**47.8**	8	2990	52.1	2984	52.3	**2985**	**52.2**

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 1333 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.

    BIOS configuration:

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

General Notes (Continued)

```
Hardware Prefetch = Disable, Adjacent Sector Prefetch = Disable

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

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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:
```
/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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