# SPEC® CFP2006 Result

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## Fujitsu Siemens Computers

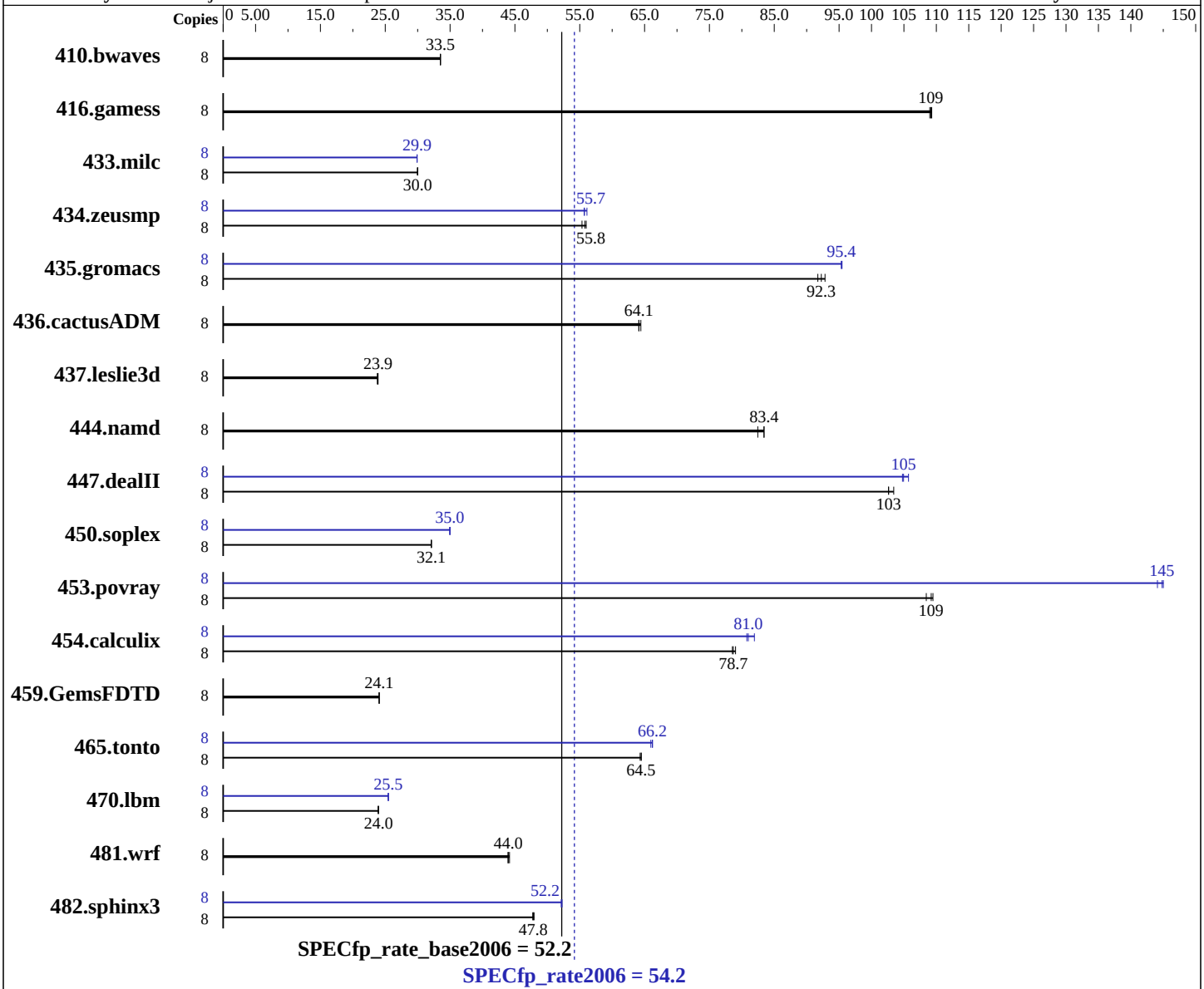
PRIMERGY RX300 S3, Intel Xeon processor E5335, 2.0 GHz

**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




### 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 |

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### 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<br>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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## General Notes (Continued)

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

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

# 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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