# SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu Siemens Computers

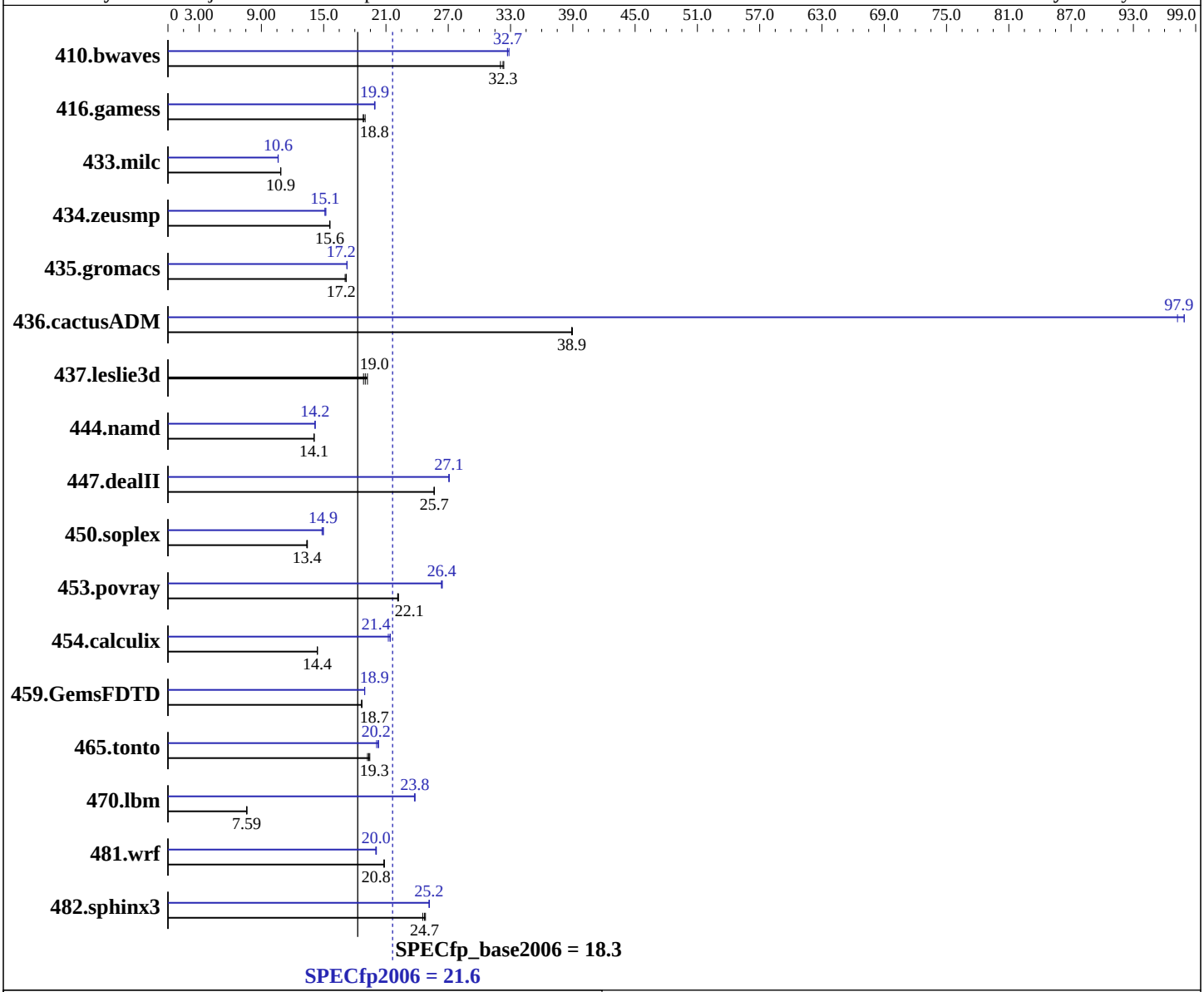
PRIMERGY RX200 S4, Intel Xeon E5430, 2.66 GHz

SPECfp®2006 = 21.6

SPECfp_base2006 = 18.3

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

**Test date:** Aug-2008
**Hardware Availability:** Dec-2007
**Software Availability:** May-2008




### Hardware

| | |
|---|---|
| CPU Name: | Intel Xeon E5430 |
| CPU Characteristics: | 1333 MHz system bus |
| CPU MHz: | 2667 |
| 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: | 12 MB I+D on chip per chip, 6 MB shared / 2 cores |

Continued on next page

### 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 |
| Peak Pointers: | 32/64-bit |

Continued on next page

# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu Siemens Computers

PRIMERGY RX200 S4, Intel Xeon E5430, 2.66 GHz

SPECfp2006 = 21.6

SPECfp_base2006 = 18.3

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

**Test date:** Aug-2008
**Hardware Availability:** Dec-2007
**Software Availability:** May-2008

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

Other Software: binutils-2.17.50.0.5-0.1.x86_64

## Results Table

| Benchmark | Base | | | | | | Peak | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 410.bwaves | 424 | 32.0 | **421** | **32.3** | 420 | 32.4 | 414 | 32.9 | **415** | **32.7** | 416 | 32.7 |
| 416.gamess | 1031 | 19.0 | 1041 | 18.8 | **1039** | **18.8** | 982 | 19.9 | **983** | **19.9** | 984 | 19.9 |
| 433.milc | **845** | **10.9** | 845 | 10.9 | 844 | 10.9 | 864 | 10.6 | 866 | 10.6 | **865** | **10.6** |
| 434.zeusmp | 583 | 15.6 | **584** | **15.6** | 584 | 15.6 | 601 | 15.1 | 598 | 15.2 | **601** | **15.1** |
| 435.gromacs | **416** | **17.2** | 418 | 17.1 | 416 | 17.2 | **414** | **17.2** | 414 | 17.2 | 414 | 17.3 |
| 436.cactusADM | **307** | **38.9** | 307 | 39.0 | 307 | 38.9 | 122 | 97.9 | **122** | **97.9** | 123 | 97.2 |
| 437.leslie3d | 499 | 18.8 | 489 | 19.2 | **494** | **19.0** | 499 | 18.8 | 489 | 19.2 | **494** | **19.0** |
| 444.namd | 570 | 14.1 | **570** | **14.1** | 569 | 14.1 | **566** | **14.2** | 566 | 14.2 | 566 | 14.2 |
| 447.dealII | 446 | 25.6 | 446 | 25.7 | **446** | **25.7** | **423** | **27.1** | 423 | 27.1 | 422 | 27.1 |
| 450.soplex | 621 | 13.4 | **622** | **13.4** | 624 | 13.4 | 557 | 15.0 | **558** | **14.9** | 562 | 14.8 |
| 453.povray | 240 | 22.2 | 240 | 22.1 | **240** | **22.1** | **202** | **26.4** | 202 | 26.3 | 201 | 26.4 |
| 454.calculix | 573 | 14.4 | 573 | 14.4 | **573** | **14.4** | 385 | 21.4 | **386** | **21.4** | 389 | 21.2 |
| 459.GemsFDTD | 569 | 18.7 | **569** | **18.7** | 568 | 18.7 | 560 | 18.9 | 560 | 19.0 | **560** | **18.9** |
| 465.tonto | 506 | 19.4 | **509** | **19.3** | 512 | 19.2 | 490 | 20.1 | 485 | 20.3 | **486** | **20.2** |
| 470.lbm | 1805 | 7.61 | 1816 | 7.57 | **1810** | **7.59** | 577 | 23.8 | **578** | **23.8** | 579 | 23.7 |
| 481.wrf | **537** | **20.8** | 537 | 20.8 | 536 | 20.9 | **557** | **20.0** | 556 | 20.1 | 558 | 20.0 |
| 482.sphinx3 | **789** | **24.7** | 786 | 24.8 | 794 | 24.5 | **775** | **25.2** | 774 | 25.2 | 775 | 25.2 |

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## Compiler Invocation Notes

```
All binaries were built with 64-bit Intel compiler except:
450.soplex, 470.lbm and 482.sphinx3 in peak were built with 32-bit Intel compiler.
```

## 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 = Enable, Adjacent Sector Prefetch = Enable
```

## General Notes

```
For information about Fujitsu Siemens Computers please see:
http://www.fujitsu-siemens.com
```

## 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 -parallel

C++ benchmarks:
-fast -parallel

Continued on next page

## Base Optimization Flags (Continued)

Fortran benchmarks:
`-fast -parallel`

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

## 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:
`ifort`

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`
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 -fno-alias -auto-ilp32`

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 -parallel`

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: `basepeak = yes`

459.GemsFDTD: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -Ob0 -prefetch -parallel`

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`

Continued on next page

# Peak Optimization Flags (Continued)

481.wrf: `-fast -parallel -prefetch -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`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/flags-ic101-linux-intel64.xml`


SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.


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

Tested with SPEC CPU2006 v1.1.
Report generated on Tue Jul 22 19:05:02 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 2 September 2008.