



SPEC® CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

SPECfp®_rate2006 = 830

PRIMERGY CX2550 M1, Intel Xeon E5-2695 v3, 2.3 GHz

SPECfp_rate_base2006 = 807

CPU2006 license: 19

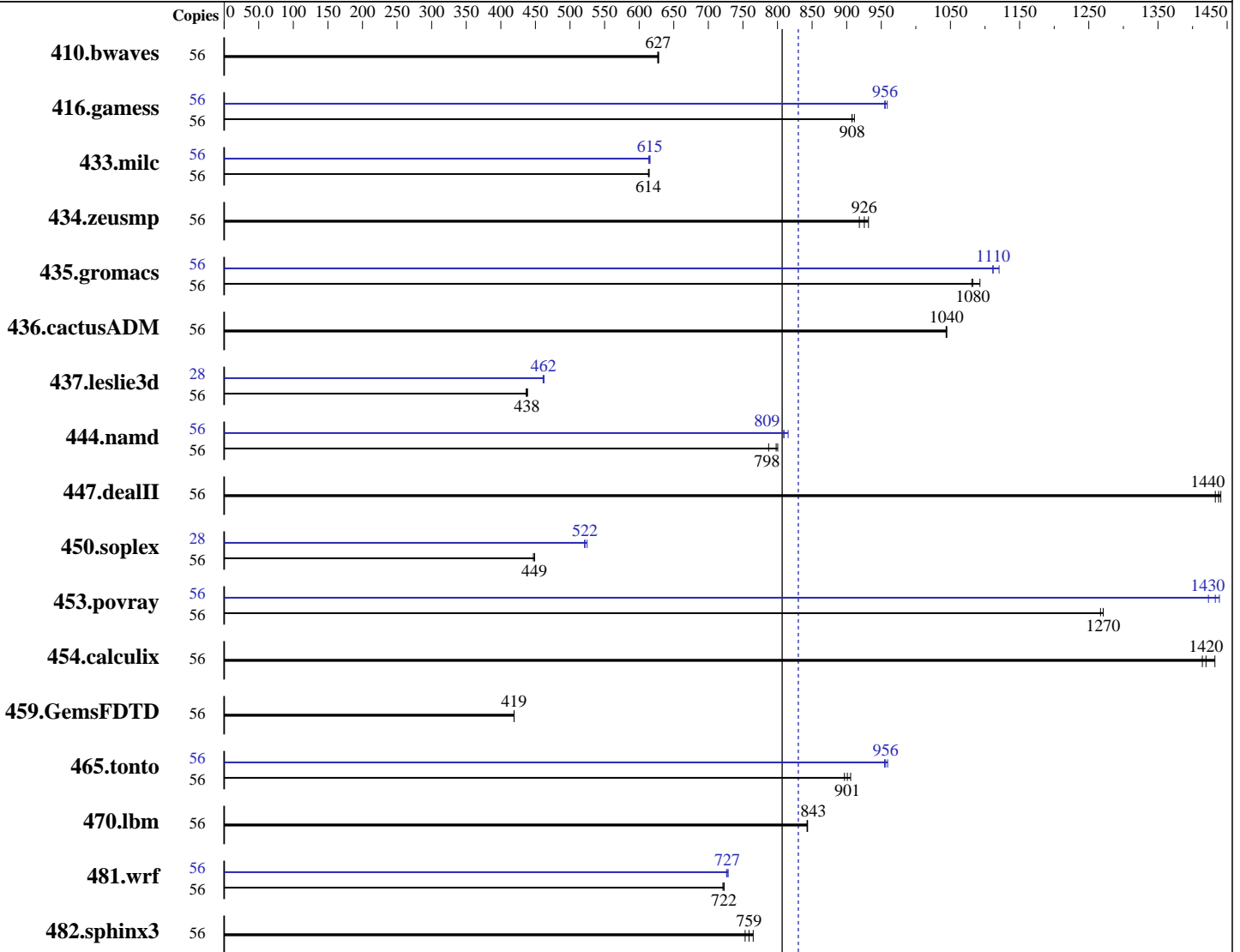
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Nov-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014



SPECfp_rate_base2006 = 807

SPECfp_rate2006 = 830

Hardware

CPU Name: Intel Xeon E5-2695 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz
 CPU MHz: 2300
 FPU: Integrated
 CPU(s) enabled: 28 cores, 2 chips, 14 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core

Continued on next page

Software

Operating System: Red Hat Enterprise Linux Server release 7.0 (Maipo)
 Kernel 3.10.0-123.8.1.el7.x86_64
 Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux;
 Fortran: Version 15.0.0.090 of Intel Fortran Studio XE for Linux
 Auto Parallel: No
 File System: xfs

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

SPECfp_rate2006 = **830**

PRIMERGY CX2550 M1, Intel Xeon E5-2695 v3, 2.3 GHz

SPECfp_rate_base2006 = **807**

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Nov-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014

L3 Cache: 35 MB I+D on chip per chip
 Other Cache: None
 Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)
 Disk Subsystem: 1 x SATA, 500 GB, 7200 RPM
 Other Hardware: None

System State: Run level 3 (multi-user)
 Base Pointers: 32/64-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 | 56 | 1214 | 627 | <u>1213</u> | <u>627</u> | 1211 | 628 | 56 | 1214 | 627 | <u>1213</u> | <u>627</u> | 1211 | 628 |
| 416.gamess | 56 | 1208 | 908 | 1203 | 911 | <u>1208</u> | <u>908</u> | 56 | 1144 | 959 | 1148 | 955 | <u>1147</u> | <u>956</u> |
| 433.milc | 56 | 837 | 615 | <u>838</u> | <u>614</u> | 838 | 614 | 56 | 837 | 614 | 835 | 616 | <u>835</u> | <u>615</u> |
| 434.zeusmp | 56 | 547 | 932 | 555 | 918 | <u>551</u> | <u>926</u> | 56 | 547 | 932 | 555 | 918 | <u>551</u> | <u>926</u> |
| 435.gromacs | 56 | 366 | 1090 | <u>369</u> | <u>1080</u> | 370 | 1080 | 56 | 360 | 1110 | <u>360</u> | <u>1110</u> | 357 | 1120 |
| 436.cactusADM | 56 | <u>641</u> | <u>1040</u> | 641 | 1040 | 641 | 1040 | 56 | <u>641</u> | <u>1040</u> | 641 | 1040 | 641 | 1040 |
| 437.leslie3d | 56 | 1206 | 437 | 1200 | 439 | <u>1202</u> | <u>438</u> | 28 | 569 | 462 | 571 | 461 | <u>570</u> | <u>462</u> |
| 444.namd | 56 | 561 | 800 | 571 | 787 | <u>563</u> | <u>798</u> | 56 | <u>555</u> | <u>809</u> | 555 | 809 | 551 | 815 |
| 447.dealII | 56 | 447 | 1430 | <u>446</u> | <u>1440</u> | 445 | 1440 | 56 | 447 | 1430 | <u>446</u> | <u>1440</u> | 445 | 1440 |
| 450.soplex | 56 | 1040 | 449 | <u>1041</u> | <u>449</u> | 1045 | 447 | 28 | 445 | 525 | <u>448</u> | <u>522</u> | 448 | 521 |
| 453.povray | 56 | 234 | 1270 | 235 | 1270 | <u>234</u> | <u>1270</u> | 56 | 207 | 1440 | <u>208</u> | <u>1430</u> | 209 | 1420 |
| 454.calculix | 56 | <u>325</u> | <u>1420</u> | 323 | 1430 | 327 | 1410 | 56 | <u>325</u> | <u>1420</u> | 323 | 1430 | 327 | 1410 |
| 459.GemsFDTD | 56 | 1417 | 419 | <u>1417</u> | <u>419</u> | 1418 | 419 | 56 | 1417 | 419 | <u>1417</u> | <u>419</u> | 1418 | 419 |
| 465.tonto | 56 | 608 | 906 | <u>612</u> | <u>901</u> | 614 | 897 | 56 | 577 | 955 | <u>576</u> | <u>956</u> | 574 | 959 |
| 470.lbm | 56 | 912 | 843 | <u>912</u> | <u>843</u> | 913 | 843 | 56 | 912 | 843 | <u>912</u> | <u>843</u> | 913 | 843 |
| 481.wrf | 56 | 865 | 723 | <u>866</u> | <u>722</u> | 868 | 721 | 56 | 858 | 729 | <u>860</u> | <u>727</u> | 861 | 726 |
| 482.sphinx3 | 56 | 1427 | 765 | <u>1438</u> | <u>759</u> | 1449 | 753 | 56 | 1427 | 765 | <u>1438</u> | <u>759</u> | 1449 | 753 |

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

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

BIOS configuration:
Energy Performance = Performance
Utilization Profile = Unbalanced

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

SPECfp_rate2006 = 830

PRIMERGY CX2550 M1, Intel Xeon E5-2695 v3, 2.3 GHz

SPECfp_rate_base2006 = 807

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Nov-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014

Platform Notes (Continued)

QPI snoop mode: Cluster on Die
COD Enable = Enabled, Early Snoop = Disabled
CPU C1E Support = Disabled

General Notes

Environment variables set by runspec before the start of the run:

```
LD_LIBRARY_PATH = "/home/SPECcpu2006/libs/32:/home/SPECcpu2006/libs/64:/home/SPECcpu2006/sh"
```

Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB memory using RedHat EL 7.0

Filesystem page cache cleared with:

```
echo 1> /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
```

This result was measured on the PRIMERGY CX2550 M1. The PRIMERGY CX2550 M1 and the PRIMERGY CX2570 M1 are electronically equivalent.

For information about Fujitsu please visit: <http://www.fujitsu.com>

Base Compiler Invocation

C benchmarks:

```
icc -m64
```

C++ benchmarks:

```
icpc -m64
```

Fortran benchmarks:

```
ifort -m64
```

Benchmarks using both Fortran and C:

```
icc -m64 ifort -m64
```

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
```

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

SPECfp_rate2006 = 830

PRIMERGY CX2550 M1, Intel Xeon E5-2695 v3, 2.3 GHz

SPECfp_rate_base2006 = 807

CPU2006 license: 19

Test date: Nov-2014

Test sponsor: Fujitsu

Hardware Availability: Sep-2014

Tested by: Fujitsu

Software Availability: Sep-2014

Base Portability Flags (Continued)

```

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:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias

```

C++ benchmarks:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias

```

Fortran benchmarks:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch

```

Benchmarks using both Fortran and C:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias

```

Peak Compiler Invocation

C benchmarks:

```

icc -m64

```

C++ benchmarks (except as noted below):

```

icpc -m64

```

```

450.soplex: icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

```

Fortran benchmarks:

```

ifort -m64

```

Benchmarks using both Fortran and C:

```

icc -m64 ifort -m64

```



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

SPECfp_rate2006 = 830

PRIMERGY CX2550 M1, Intel Xeon E5-2695 v3, 2.3 GHz

SPECfp_rate_base2006 = 807

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Nov-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014

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
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

```

Peak Optimization Flags

C benchmarks:

```

433.milc: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
         -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
         -auto-ilp32

```

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

```

444.namd: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
         -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
         -fno-alias -auto-ilp32

```

447.dealII: basepeak = yes

```

450.soplex: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
           -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
           -opt-malloc-options=3

```

```

453.povray: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
           -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4
           -ansi-alias

```

Fortran benchmarks:

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

SPECfp_rate2006 = 830

PRIMERGY CX2550 M1, Intel Xeon E5-2695 v3, 2.3 GHz

SPECfp_rate_base2006 = 807

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Nov-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014

Peak Optimization Flags (Continued)

410.bwaves: basepeak = yes

416.gamess: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll2
-inline-level=0 -scalar-rep-

434.zeusmp: basepeak = yes

437.leslie3d: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch

459.GemsFDTD: basepeak = yes

465.tonto: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4
-auto -inline-calloc -opt-malloc-options=3

Benchmarks using both Fortran and C:

435.gromacs: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-opt-prefetch -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

481.wrf: -xCORE-AVX2 -ipo -O3 -no-prec-div -auto-ilp32

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.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 v1.2.
Report generated on Tue Jan 27 13:33:40 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 27 January 2015.