



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

## Fujitsu

### SPECfp<sup>®</sup>\_rate2006 = 290

PRIMERGY CX2550 M1, Intel Xeon E5-2603 v3, 1.6 GHz

### SPECfp\_rate\_base2006 = 283

CPU2006 license: 19

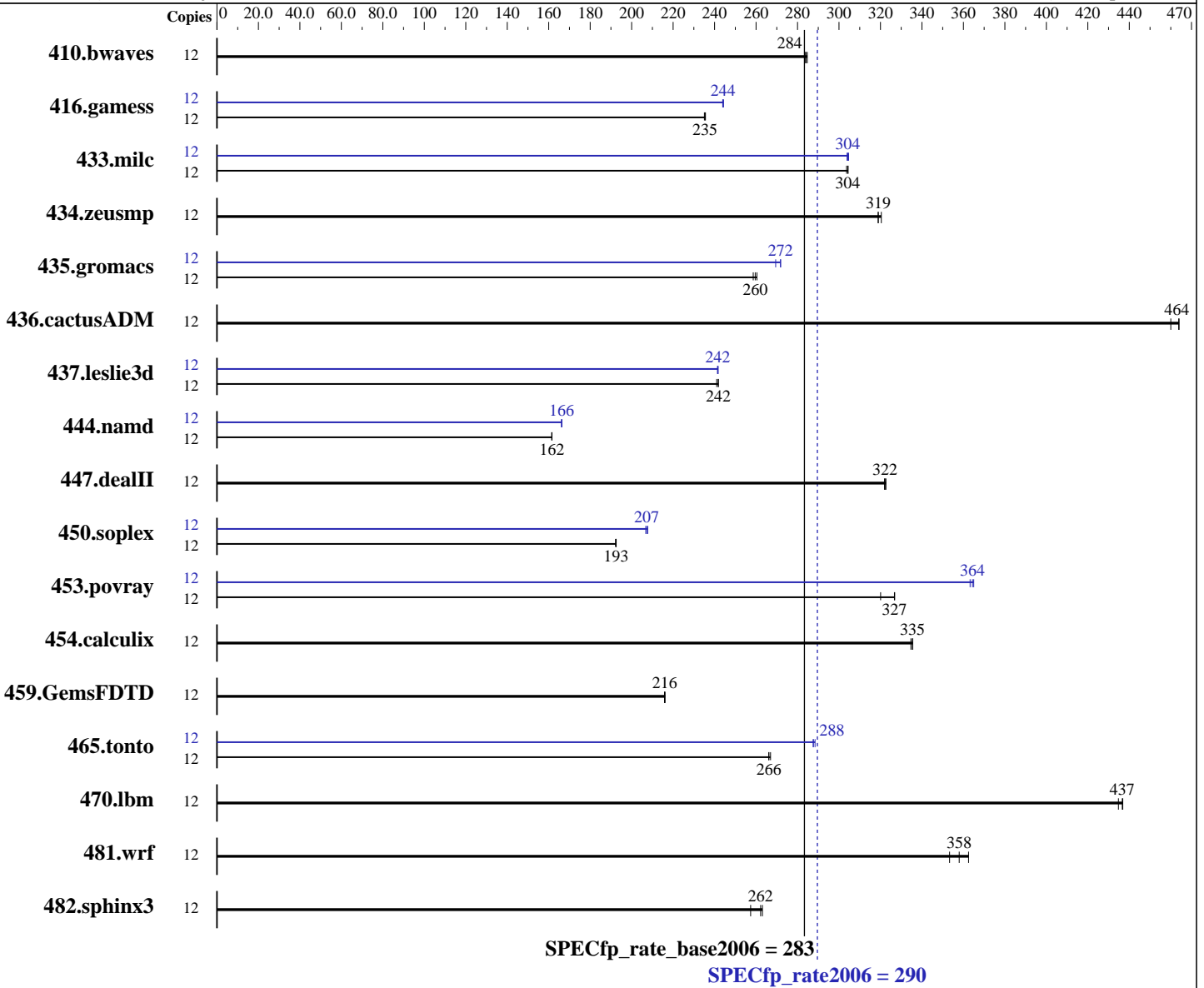
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Dec-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014



### Hardware

CPU Name: Intel Xeon E5-2603 v3  
 CPU Characteristics:  
 CPU MHz: 1600  
 FPU: Integrated  
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip  
 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 = 290

PRIMERGY CX2550 M1, Intel Xeon E5-2603 v3, 1.6 GHz

SPECfp\_rate\_base2006 = 283

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Dec-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014

L3 Cache: 15 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R, running at 1600 MHz)  
 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	12	574	284	573	285	<b>574</b>	<b>284</b>	12	574	284	573	285	<b>574</b>	<b>284</b>
416.gamess	12	997	236	<b>998</b>	<b>235</b>	999	235	12	962	244	963	244	<b>963</b>	<b>244</b>
433.milc	12	362	304	363	304	<b>362</b>	<b>304</b>	12	362	305	<b>362</b>	<b>304</b>	363	304
434.zeusmp	12	<b>342</b>	<b>319</b>	341	320	342	319	12	<b>342</b>	<b>319</b>	341	320	342	319
435.gromacs	12	<b>330</b>	<b>260</b>	331	259	329	260	12	318	269	<b>315</b>	<b>272</b>	315	272
436.cactusADM	12	309	464	<b>309</b>	<b>464</b>	312	460	12	309	464	<b>309</b>	<b>464</b>	312	460
437.leslie3d	12	467	242	<b>467</b>	<b>242</b>	468	241	12	467	242	<b>467</b>	<b>242</b>	467	241
444.namd	12	<b>596</b>	<b>162</b>	596	162	596	161	12	579	166	<b>579</b>	<b>166</b>	579	166
447.dealII	12	<b>426</b>	<b>322</b>	425	323	426	322	12	<b>426</b>	<b>322</b>	425	323	426	322
450.soplex	12	<b>520</b>	<b>193</b>	520	193	521	192	12	<b>483</b>	<b>207</b>	482	208	484	207
453.povray	12	195	327	<b>195</b>	<b>327</b>	199	320	12	175	365	<b>175</b>	<b>364</b>	176	363
454.calculix	12	296	335	295	335	<b>295</b>	<b>335</b>	12	296	335	295	335	<b>295</b>	<b>335</b>
459.GemsFDTD	12	<b>590</b>	<b>216</b>	590	216	589	216	12	<b>590</b>	<b>216</b>	590	216	589	216
465.tonto	12	444	266	<b>444</b>	<b>266</b>	442	267	12	<b>411</b>	<b>288</b>	409	288	411	288
470.lbm	12	379	435	<b>378</b>	<b>437</b>	377	437	12	379	435	<b>378</b>	<b>437</b>	377	437
481.wrf	12	379	353	<b>374</b>	<b>358</b>	370	362	12	379	353	<b>374</b>	<b>358</b>	370	362
482.sphinx3	12	909	257	<b>892</b>	<b>262</b>	889	263	12	909	257	<b>892</b>	<b>262</b>	889	263

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 = 290**

PRIMERGY CX2550 M1, Intel Xeon E5-2603 v3, 1.6 GHz

**SPECfp\_rate\_base2006 = 283**

**CPU2006 license:** 19

**Test date:** Dec-2014

**Test sponsor:** Fujitsu

**Hardware Availability:** Sep-2014

**Tested by:** Fujitsu

**Software Availability:** Sep-2014

## Platform Notes (Continued)

QPI snoop mode: Early Snoop  
COD Enable = Disabled, Early Snoop = Enabled  
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 = 290**

PRIMERGY CX2550 M1, Intel Xeon E5-2603 v3, 1.6 GHz

**SPECfp\_rate\_base2006 = 283**

**CPU2006 license:** 19

**Test date:** Dec-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 = 290**

PRIMERGY CX2550 M1, Intel Xeon E5-2603 v3, 1.6 GHz

**SPECfp\_rate\_base2006 = 283**

**CPU2006 license:** 19

**Test sponsor:** Fujitsu

**Tested by:** Fujitsu

**Test date:** Dec-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 = 290**

PRIMERGY CX2550 M1, Intel Xeon E5-2603 v3, 1.6 GHz

**SPECfp\_rate\_base2006 = 283**

**CPU2006 license:** 19

**Test sponsor:** Fujitsu

**Tested by:** Fujitsu

**Test date:** Dec-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: basepeak = yes

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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.  
Report generated on Tue Jan 27 13:33:23 2015 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 27 January 2015.