SPEC® CFP2006 Result

Fujitsu

$SPECfp^{®}2006 =$ 110

PRIMERGY CX2550 M1, Intel Xeon E5-2670 v3, 2.3 GHz

$SPECfp\_base2006 =$ 105

CPU2006 license:	19	**Test date:**	Nov-2014
Test sponsor:	Fujitsu	**Hardware Availability:**	Sep-2014
Tested by:	Fujitsu	**Software Availability:**	Sep-2014

410.bwaves 555
416.gamess 37.6 / 32.6
433.milc 69.2 / 68.6
434.zeusmp 207
435.gromacs 39.6
436.cactusADM 897
437.leslie3d 370
444.namd 26.8 / 26.2
447.dealII 51.2
450.soplex 43.1
453.povray 55.2 / 49.4
454.calculix 51.5 / 48.2
459.GemsFDTD 283 / 235
465.tonto 45.9 / 36.6
470.lbm 791
481.wrf 113
482.sphinx3 67.0

SPECfp_base2006 = 105

SPECfp2006 = 110

Hardware

CPU Name:	Intel Xeon E5-2670 v3
CPU Characteristics:	Intel Turbo Boost Technology up to 3.10 GHz
CPU MHz:	2300
FPU:	Integrated
CPU(s) enabled:	24 cores, 2 chips, 12 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:	Yes
File System:	xfs

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY CX2550 M1, Intel Xeon E5-2670 v3, 2.3 GHz

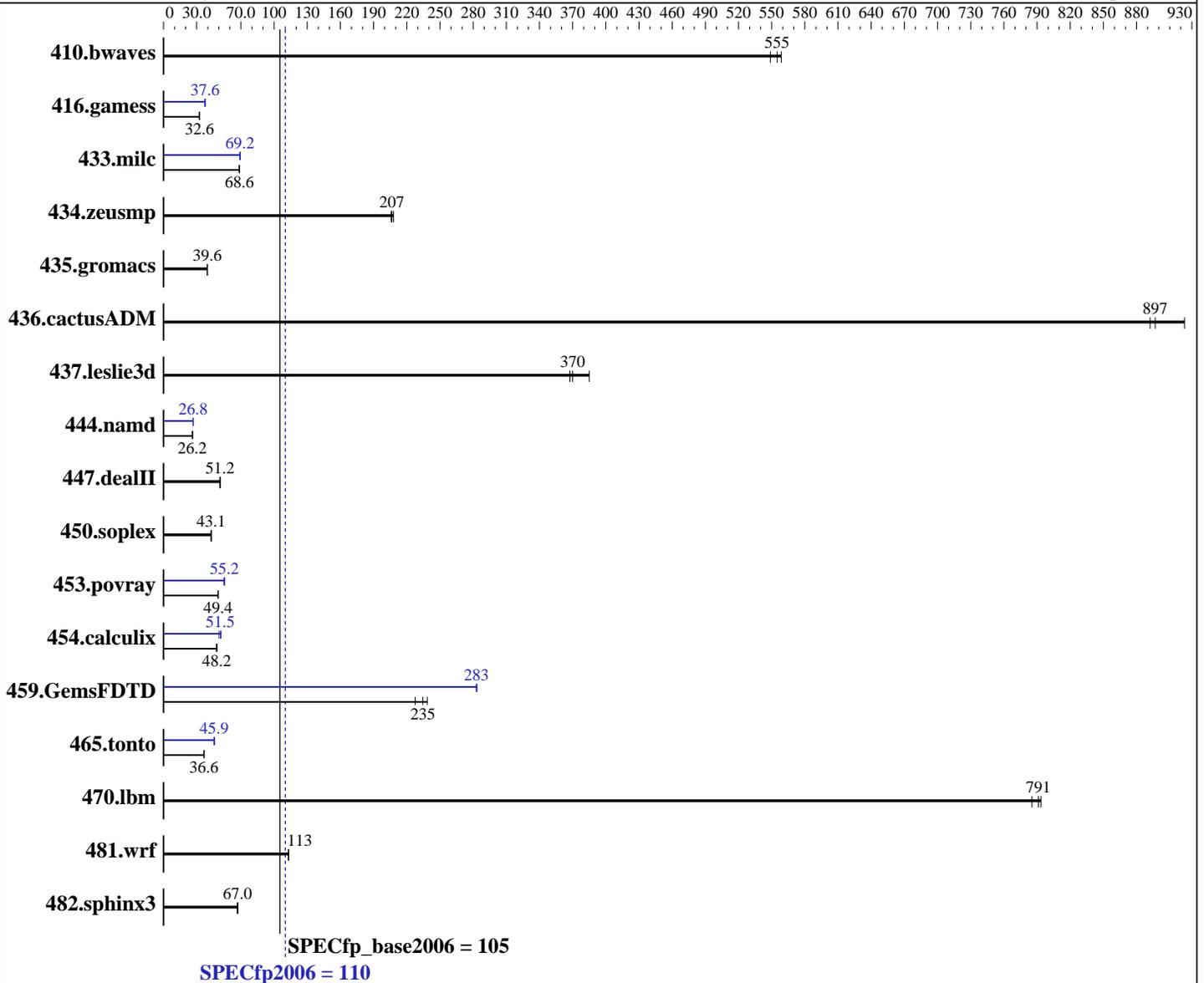|	
$SPECfp2006 =$	110
$SPECfp\_base2006 =$	105

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Nov-2014
Hardware Availability: Sep-2014
Software Availability: Sep-2014

L3 Cache:	30 MB I+D on chip per chip	System State:	Run level 3 (multi-user)
Other Cache:	None	Base Pointers:	64-bit
Memory:	256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)	Peak Pointers:	32/64-bit
Disk Subsystem:	1 x SATA, 500 GB, 7200 RPM	Other Software:	None
Other Hardware:	None		

Results Table

Benchmark	Base Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Peak Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	**24.5**	**555**	24.3	559	24.8	549	**24.5**	**555**	24.3	559	24.8	549
416.gamess	601	32.6	603	32.4	**602**	**32.6**	520	37.6	**520**	**37.6**	524	37.4
433.milc	**134**	**68.6**	134	68.4	133	68.8	**133**	**69.2**	132	69.4	133	69.0
434.zeusmp	43.8	208	44.2	206	**44.1**	**207**	43.8	208	44.2	206	**44.1**	**207**
435.gromacs	180	39.7	**180**	**39.6**	180	39.6	180	39.7	**180**	**39.6**	180	39.6
436.cactusADM	13.4	892	**13.3**	**897**	12.9	923	13.4	892	**13.3**	**897**	12.9	923
437.leslie3d	**25.4**	**370**	24.4	385	25.6	368	**25.4**	**370**	24.4	385	25.6	368
444.namd	306	26.2	**307**	**26.2**	307	26.2	298	26.9	301	26.6	**299**	**26.8**
447.dealII	224	51.2	223	51.3	**223**	**51.2**	224	51.2	223	51.3	**223**	**51.2**
450.soplex	194	43.0	**194**	**43.1**	192	43.4	194	43.0	**194**	**43.1**	192	43.4
453.povray	**108**	**49.4**	107	49.5	108	49.1	96.0	55.4	**96.3**	**55.2**	97.2	54.7
454.calculix	172	48.0	171	48.3	**171**	**48.2**	**160**	**51.5**	159	52.0	164	50.3
459.GemsFDTD	**45.2**	**235**	44.5	239	46.6	228	**37.5**	**283**	37.4	284	37.5	283
465.tonto	269	36.6	**269**	**36.6**	268	36.7	215	45.8	214	46.0	**214**	**45.9**
470.lbm	**17.4**	**791**	17.3	794	17.5	785	**17.4**	**791**	17.3	794	17.5	785
481.wrf	98.6	113	**98.7**	**113**	99.0	113	98.6	113	**98.7**	**113**	99.0	113
482.sphinx3	**291**	**67.0**	289	67.4	292	66.8	**291**	**67.0**	289	67.4	292	66.8

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

Operating System Notes

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

Platform Notes

    BIOS configuration:
    Energy Performance = Performance
    Utilization Profile = Unbalanced
    QPI snoop mode: Home Snoop
        COD Enable = Disabled, Early Snoop = Disabled
    CPU C1E Support = Disabled

SPEC CFP2006 Result
Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY CX2550 M1, Intel Xeon E5-2670 v3, 2.3 GHz

SPECfp2006 =	110
SPECfp_base2006 =	105

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Nov-2014
Hardware Availability: Sep-2014
Software Availability: Sep-2014

General Notes

```
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact,1,0"
LD_LIBRARY_PATH = "/home/SPECcpu2006/libs/32:/home/SPECcpu2006/libs/64:/home/SPECcpu2006/sh"
OMP_NUM_THREADS = "24"

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

 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
    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
```

SPEC CFP2006 Result
Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY CX2550 M1, Intel Xeon E5-2670 v3, 2.3 GHz

SPECfp2006 =	110
SPECfp_base2006 =	105

Base Optimization Flags

C benchmarks:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch
-ansi-alias
```

C++ benchmarks:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias
```

Fortran benchmarks:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch
```

Benchmarks using both Fortran and C:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch
-ansi-alias
```

Peak Compiler Invocation

C benchmarks:
```
icc    -m64
```

C++ benchmarks:
```
icpc   -m64
```

Fortran benchmarks:
```
ifort -m64
```

Benchmarks using both Fortran and C:
```
icc    -m64 ifort -m64
```

Peak Portability Flags

```
Same as Base Portability Flags
```

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 -ansi-alias

    470.lbm: basepeak = yes

    482.sphinx3: basepeak = yes
```

Continued on next page

Fujitsu

PRIMERGY CX2550 M1, Intel Xeon E5-2670 v3, 2.3 GHz

$SPECfp2006 =$ 110

$SPECfp\_base2006 =$ 105

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)

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: `basepeak = yes`

    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:

    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: `basepeak = yes`

  459.GemsFDTD: `-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 -opt-prefetch -parallel`

    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)`
        `-inline-calloc -opt-malloc-options=3 -auto -unroll4`

Benchmarks using both Fortran and C:

    435.gromacs: `basepeak = yes`

  436.cactusADM: `basepeak = yes`

    454.calculix: `-xCORE-AVX2 -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias`

      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

SPEC CFP2006 Result
Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY CX2550 M1, Intel Xeon E5-2670 v3, 2.3 GHz

SPECfp2006 =	110
SPECfp_base2006 =	**105**

CPU2006 license: 19		**Test date:**	Nov-2014
Test sponsor:	Fujitsu	**Hardware Availability:**	Sep-2014
Tested by:	Fujitsu	**Software Availability:**	Sep-2014

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

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 Wed Jan 14 10:27:28 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 13 January 2015.