



SPEC[®] CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX4770 M2, Intel Xeon E7-8867 v3, 2.50 GHz

SPECfp[®]_rate2006 = 1910

SPECfp_rate_base2006 = 1860

CPU2006 license: 19

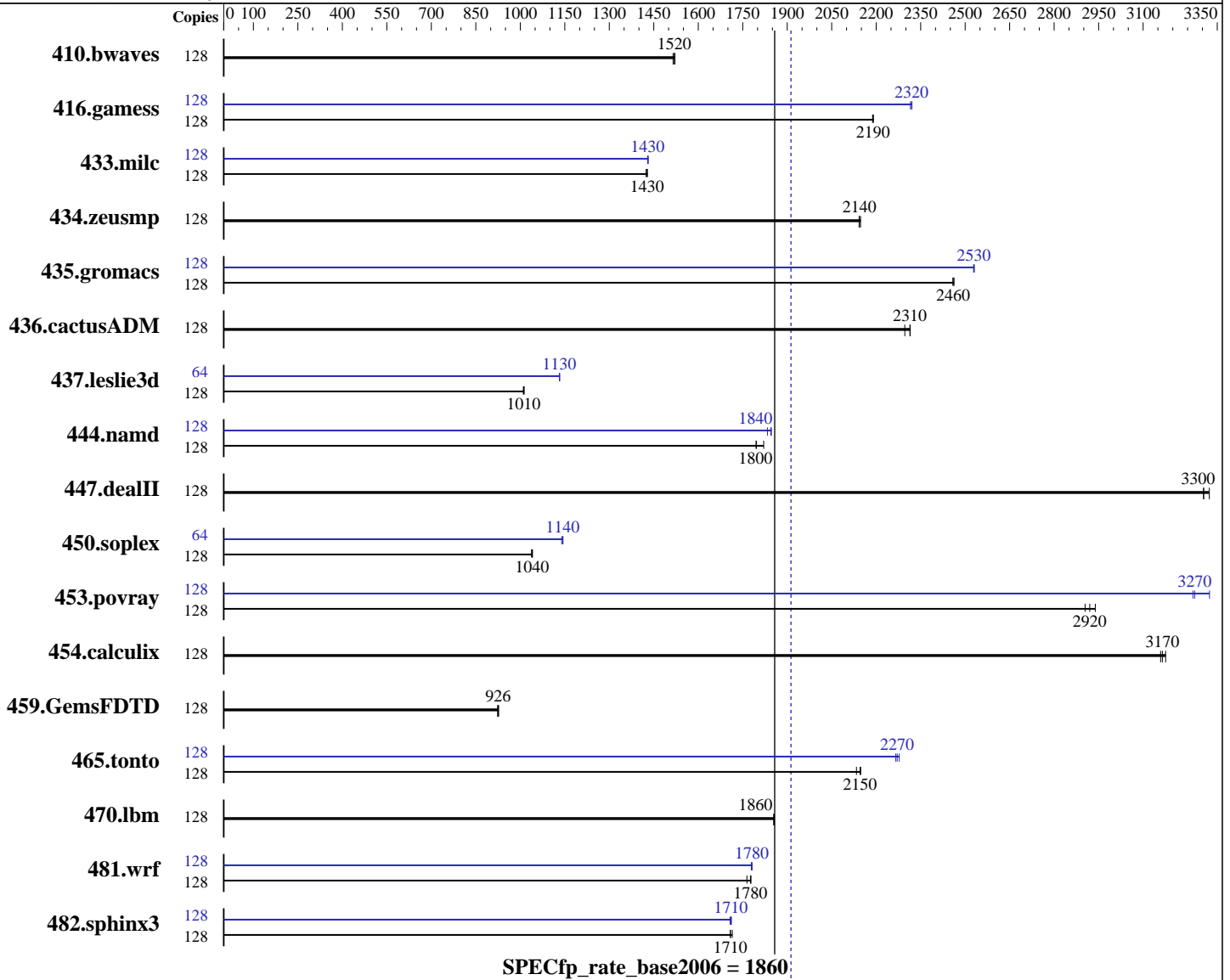
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: May-2015

Hardware Availability: May-2015

Software Availability: Mar-2015



Hardware

CPU Name: Intel Xeon E7-8867 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz
 CPU MHz: 2500
 FPU: Integrated
 CPU(s) enabled: 64 cores, 4 chips, 16 cores/chip, 2 threads/core
 CPU(s) orderable: 2,4 chips
 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 7.1 (Maipo)
 3.10.0-229.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: ext4

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX4770 M2, Intel Xeon E7-8867 v3, 2.50 GHz

SPECfp_rate2006 = 1910

SPECfp_rate_base2006 = 1860

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: May-2015

Hardware Availability: May-2015

Software Availability: Mar-2015

L3 Cache: 45 MB I+D on chip per chip
Other Cache: None
Memory: 512 GB (32 x 16 GB 2Rx4 PC4-2133P-R, running at 1600 MHz)
Disk Subsystem: 1 x SATA, 600 GB, 10000 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	128	1148	1520	1145	1520	1143	1520	128	1148	1520	1145	1520	1143	1520
416.gamess	128	1144	2190	1145	2190	1146	2190	128	1081	2320	1080	2320	1082	2320
433.milc	128	823	1430	825	1420	823	1430	128	822	1430	821	1430	822	1430
434.zeusmp	128	543	2140	544	2140	542	2150	128	543	2140	544	2140	542	2150
435.gromacs	128	372	2460	371	2460	372	2460	128	361	2530	361	2530	361	2530
436.cactusADM	128	666	2300	661	2310	661	2310	128	666	2300	661	2310	661	2310
437.leslie3d	128	1188	1010	1191	1010	1190	1010	64	532	1130	531	1130	531	1130
444.namd	128	564	1820	572	1790	571	1800	128	557	1840	556	1850	560	1830
447.dealII	128	441	3320	443	3300	443	3300	128	441	3320	443	3300	443	3300
450.soplex	128	1029	1040	1026	1040	1026	1040	64	468	1140	467	1140	467	1140
453.povray	128	234	2900	232	2940	233	2920	128	205	3320	208	3270	208	3270
454.calculix	128	334	3160	334	3170	332	3180	128	334	3160	334	3170	332	3180
459.GemsFDTD	128	1467	926	1471	923	1465	927	128	1467	926	1471	923	1465	927
465.tonto	128	590	2130	586	2150	587	2150	128	553	2280	555	2270	556	2270
470.lbm	128	948	1850	947	1860	948	1860	128	948	1850	947	1860	948	1860
481.wrf	128	805	1780	810	1760	804	1780	128	803	1780	803	1780	804	1780
482.sphinx3	128	1461	1710	1455	1710	1460	1710	128	1461	1710	1459	1710	1457	1710

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



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX4770 M2, Intel Xeon E7-8867 v3, 2.50 GHz

SPECfp_rate2006 = 1910

SPECfp_rate_base2006 = 1860

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

Test date: May-2015
Hardware Availability: May-2015
Software Availability: Mar-2015

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>

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.deallI: -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 RX4770 M2, Intel Xeon E7-8867 v3, 2.50 GHz

SPECfp_rate2006 = 1910

SPECfp_rate_base2006 = 1860

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

Test date: May-2015
Hardware Availability: May-2015
Software Availability: Mar-2015

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

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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX4770 M2, Intel Xeon E7-8867 v3, 2.50 GHz

SPECfp_rate2006 = 1910

SPECfp_rate_base2006 = 1860

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

Test date: May-2015
Hardware Availability: May-2015
Software Availability: Mar-2015

Peak Portability Flags (Continued)

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: -xCORE-AVX2 -prof-gen(pass 1) -ipo -O3 -no-prec-div
-prof-use(pass 2) -unroll2

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:

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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX4770 M2, Intel Xeon E7-8867 v3, 2.50 GHz

SPECfp_rate2006 = 1910

SPECfp_rate_base2006 = 1860

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

Test date: May-2015
Hardware Availability: May-2015
Software Availability: Mar-2015

Peak Optimization Flags (Continued)

```
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/Fujitsu-Platform-Settings-V1.2-HSW-RevA.html>
<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.html>

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

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.xml>
<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.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 Aug 25 17:52:13 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 25 August 2015.