



SPEC® CFP2006 Result

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Fujitsu

PRIMERGY CX2570 M1, Intel Xeon E5-2687W v3, 3.1 GHz

SPECfp®2006 = 121

SPECfp_base2006 = 115

CPU2006 license: 19

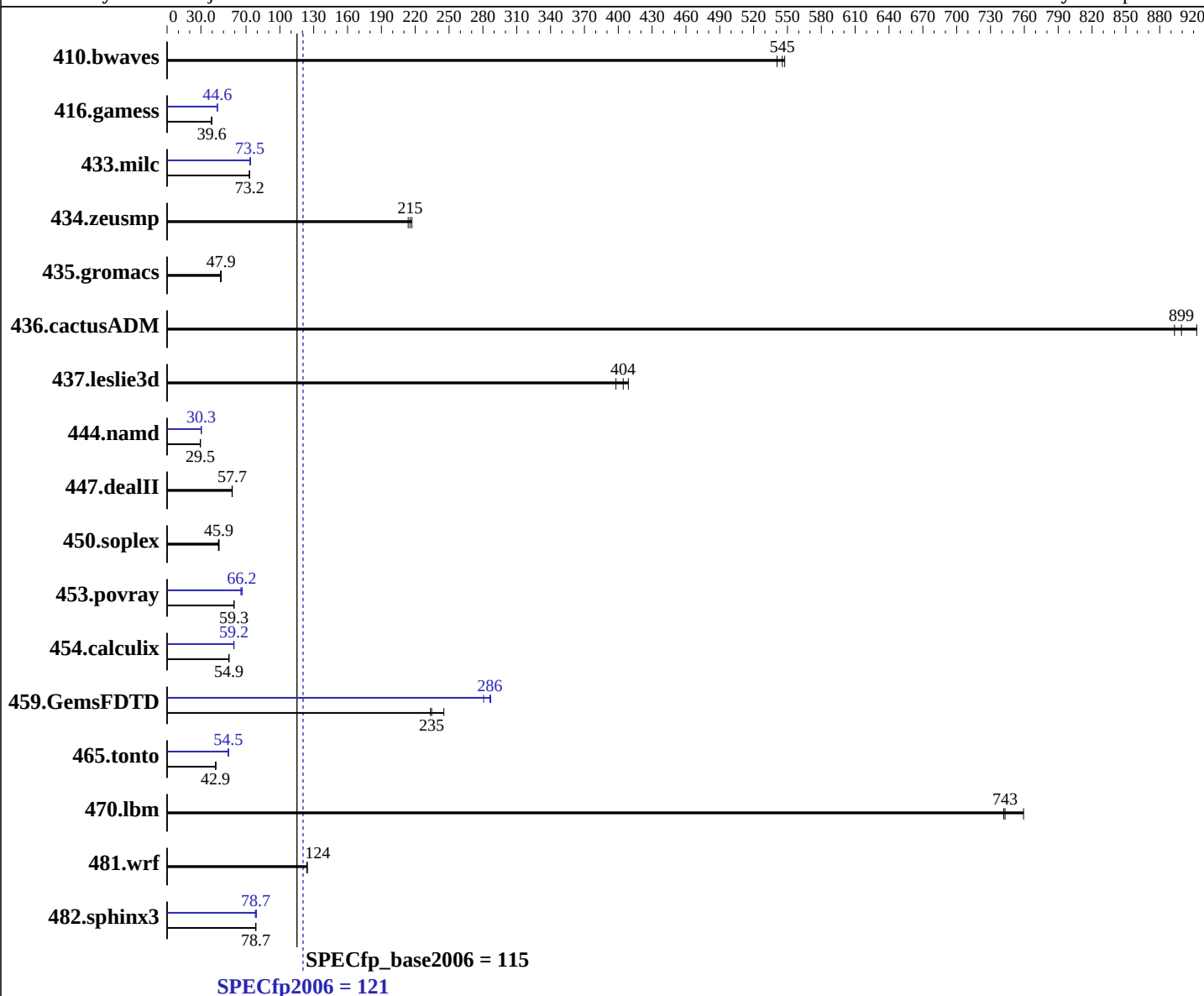
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Dec-2014

Hardware Availability: Sep-2014

Software Availability: Sep-2014



Hardware

CPU Name: Intel Xeon E5-2687W v3
CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz
CPU MHz: 3100
FPU: Integrated
CPU(s) enabled: 20 cores, 2 chips, 10 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

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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

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L3 Cache: 25 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: 64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	<u>24.9</u>	<u>545</u>	25.1	541	24.8	548	<u>24.9</u>	<u>545</u>	25.1	541	24.8	548
416.gamess	<u>494</u>	<u>39.6</u>	494	39.6	498	39.4	<u>439</u>	<u>44.6</u>	439	44.6	439	44.6
433.milc	125	73.3	<u>125</u>	<u>73.2</u>	126	72.8	<u>125</u>	<u>73.5</u>	124	74.0	<u>125</u>	<u>73.5</u>
434.zeusmp	<u>42.2</u>	<u>215</u>	42.6	214	41.9	217	<u>42.2</u>	<u>215</u>	42.6	214	41.9	217
435.gromacs	151	47.3	<u>149</u>	<u>47.9</u>	149	47.9	<u>151</u>	<u>47.3</u>	<u>149</u>	<u>47.9</u>	149	47.9
436.cactusADM	13.4	893	13.1	913	<u>13.3</u>	<u>899</u>	13.4	893	13.1	913	<u>13.3</u>	<u>899</u>
437.leslie3d	23.0	409	<u>23.2</u>	<u>404</u>	23.6	398	<u>23.0</u>	<u>409</u>	<u>23.2</u>	<u>404</u>	23.6	398
444.namd	272	29.5	<u>272</u>	<u>29.5</u>	272	29.5	<u>264</u>	<u>30.3</u>	265	30.3	264	30.3
447.dealII	199	57.6	<u>198</u>	<u>57.7</u>	198	57.8	<u>199</u>	<u>57.6</u>	<u>198</u>	<u>57.7</u>	198	57.8
450.soplex	181	46.1	183	45.5	<u>182</u>	<u>45.9</u>	<u>181</u>	<u>46.1</u>	183	45.5	<u>182</u>	<u>45.9</u>
453.povray	<u>89.7</u>	<u>59.3</u>	89.5	59.5	89.9	59.2	<u>80.3</u>	<u>66.2</u>	81.3	65.4	79.8	66.7
454.calculix	<u>150</u>	<u>54.9</u>	150	54.9	150	54.9	<u>139</u>	<u>59.2</u>	139	59.4	140	59.0
459.GemsFDTD	45.4	233	<u>45.2</u>	<u>235</u>	43.2	245	<u>37.0</u>	<u>287</u>	<u>37.1</u>	<u>286</u>	37.8	281
465.tonto	<u>229</u>	<u>42.9</u>	229	42.9	227	43.4	<u>180</u>	<u>54.6</u>	182	54.1	<u>181</u>	<u>54.5</u>
470.lbm	<u>18.5</u>	<u>743</u>	18.5	742	18.1	759	<u>18.5</u>	<u>743</u>	18.5	742	18.1	759
481.wrf	89.8	124	90.1	124	<u>90.0</u>	<u>124</u>	<u>89.8</u>	<u>124</u>	90.1	124	<u>90.0</u>	<u>124</u>
482.sphinx3	248	78.7	<u>248</u>	<u>78.7</u>	248	78.5	<u>248</u>	<u>78.7</u>	246	79.3	249	78.2

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



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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 = "20"

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.lelie3d: -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



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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: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -ansi-alias
-parallel

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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>



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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>

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For other inquiries, please contact webmaster@spec.org.

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