



SPEC[®] CFP2006 Result

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Fujitsu

SPECfp[®]2006 = **81.4**

PRIMERGY TX300 S7, Intel Xeon E5-2670, 2.60 GHz

SPECfp_base2006 = **77.0**

CPU2006 license: 19

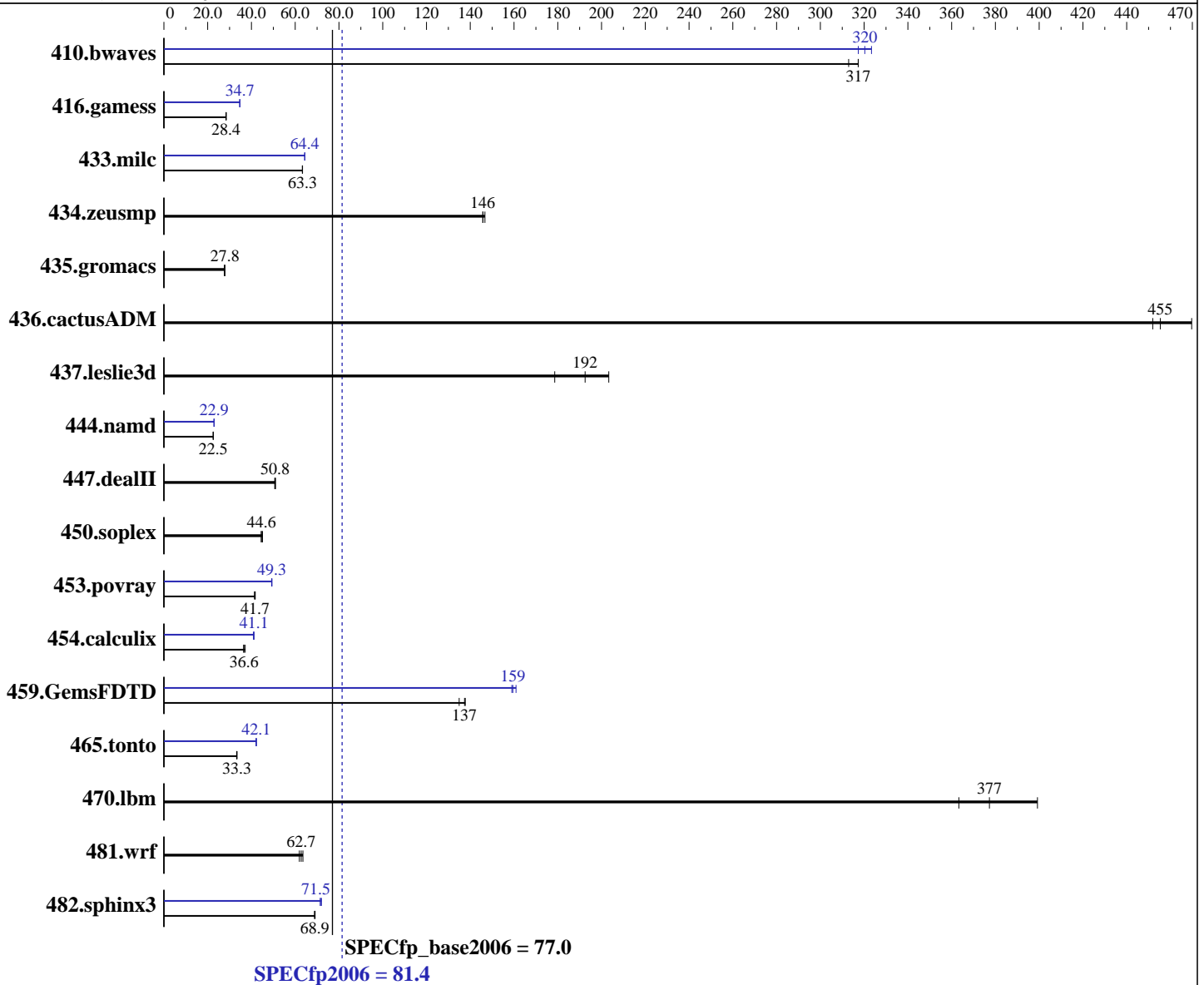
Test date: Jan-2012

Test sponsor: Fujitsu

Hardware Availability: Mar-2012

Tested by: Fujitsu

Software Availability: Dec-2011



Hardware

CPU Name: Intel Xeon E5-2670
 CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz
 CPU MHz: 2600
 FPU: Integrated
 CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip
 CPU(s) orderable: 1,2 chips
 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 6.2 (Santiago)
 2.6.32-220.el6.x86_64
 Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux;
 Fortran: Version 12.1.0.225 of Intel Fortran Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4

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L3 Cache: 20 MB I+D on chip per chip
 Other Cache: None
 Memory: 128 GB (16 x 8 GB 2Rx4 PC3L-12800R-11, ECC)
 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>42.8</u>	<u>317</u>	43.4	313	42.8	317	<u>42.4</u>	<u>320</u>	42.0	323	42.8	317
416.gamess	690	28.4	<u>689</u>	<u>28.4</u>	688	28.4	563	34.8	566	34.6	<u>564</u>	<u>34.7</u>
433.milc	145	63.2	145	63.3	<u>145</u>	<u>63.3</u>	142	64.4	<u>143</u>	<u>64.4</u>	143	64.3
434.zeusmp	<u>62.4</u>	<u>146</u>	62.0	147	62.4	146	<u>62.4</u>	<u>146</u>	62.0	147	62.4	146
435.gromacs	258	27.6	256	27.9	<u>257</u>	<u>27.8</u>	258	27.6	256	27.9	<u>257</u>	<u>27.8</u>
436.cactusADM	25.4	470	<u>26.2</u>	<u>455</u>	26.4	452	25.4	470	<u>26.2</u>	<u>455</u>	26.4	452
437.leslie3d	46.2	203	<u>48.8</u>	<u>192</u>	52.6	179	46.2	203	<u>48.8</u>	<u>192</u>	52.6	179
444.namd	<u>356</u>	<u>22.5</u>	356	22.6	356	22.5	<u>350</u>	<u>22.9</u>	350	22.9	350	22.9
447.dealII	<u>225</u>	<u>50.8</u>	224	51.0	226	50.6	<u>225</u>	<u>50.8</u>	224	51.0	226	50.6
450.soplex	187	44.5	<u>187</u>	<u>44.6</u>	185	45.1	187	44.5	<u>187</u>	<u>44.6</u>	185	45.1
453.povray	128	41.7	<u>128</u>	<u>41.7</u>	129	41.4	108	49.2	108	49.4	<u>108</u>	<u>49.3</u>
454.calculix	222	37.1	226	36.4	<u>225</u>	<u>36.6</u>	202	40.9	<u>201</u>	<u>41.1</u>	200	41.2
459.GemsFDTD	77.0	138	78.6	135	<u>77.2</u>	<u>137</u>	<u>66.5</u>	<u>159</u>	65.9	161	66.7	159
465.tonto	294	33.4	<u>296</u>	<u>33.3</u>	296	33.2	234	42.1	<u>233</u>	<u>42.1</u>	233	42.3
470.lbm	34.4	399	<u>36.4</u>	<u>377</u>	37.8	363	34.4	399	<u>36.4</u>	<u>377</u>	37.8	363
481.wrf	176	63.5	180	61.9	<u>178</u>	<u>62.7</u>	176	63.5	180	61.9	<u>178</u>	<u>62.7</u>
482.sphinx3	283	68.9	<u>283</u>	<u>68.9</u>	282	69.1	<u>272</u>	<u>71.5</u>	271	72.0	273	71.5

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:
 Intel HT Technology = Disable
 Frequency Floor Override = Enable

General Notes

Environment variables set by runspec before the start of the run:
 KMP_AFFINITY = "granularity=fine,scatter"
 LD_LIBRARY_PATH = "/SPECcpu2006/libs/32:/SPECcpu2006/libs/64"

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General Notes (Continued)

OMP_NUM_THREADS = "16"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled

This result was measured on the PRIMERGY RX350 S7. The PRIMERGY RX350 S7 and the PRIMERGY TX300 S7 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



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Base Optimization Flags

C benchmarks:

`-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
-ansi-alias`

C++ benchmarks:

`-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias`

Fortran benchmarks:

`-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch`

Benchmarks using both Fortran and C:

`-xAVX -ipo -O3 -no-prec-div -static -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: `-xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32
-ansi-alias`

470.lbm: `basepeak = yes`

482.sphinx3: `-xAVX -ipo -O3 -no-prec-div -unroll2 -ansi-alias
-parallel`

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Peak Optimization Flags (Continued)

C++ benchmarks:

444.namd: -xAVX(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.dealIII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -xAVX(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: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -parallel
-static

416.gamess: -xAVX(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- -static

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -xAVX(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: -xAVX(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: -xAVX -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/Fujitsu-Platform.20120320.html>

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html>



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

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120320.xml>

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml>

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

Tested with SPEC CPU2006 v1.2.
Report generated on Thu Jul 24 07:37:16 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 10 April 2012.