



SPEC[®] CFP2006 Result

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Fujitsu

SPECfp[®]2006 = **82.3**

PRIMERGY CX250 S1, Intel Xeon E5-2670, 2.60 GHz

SPECfp_base2006 = **77.9**

CPU2006 license: 19

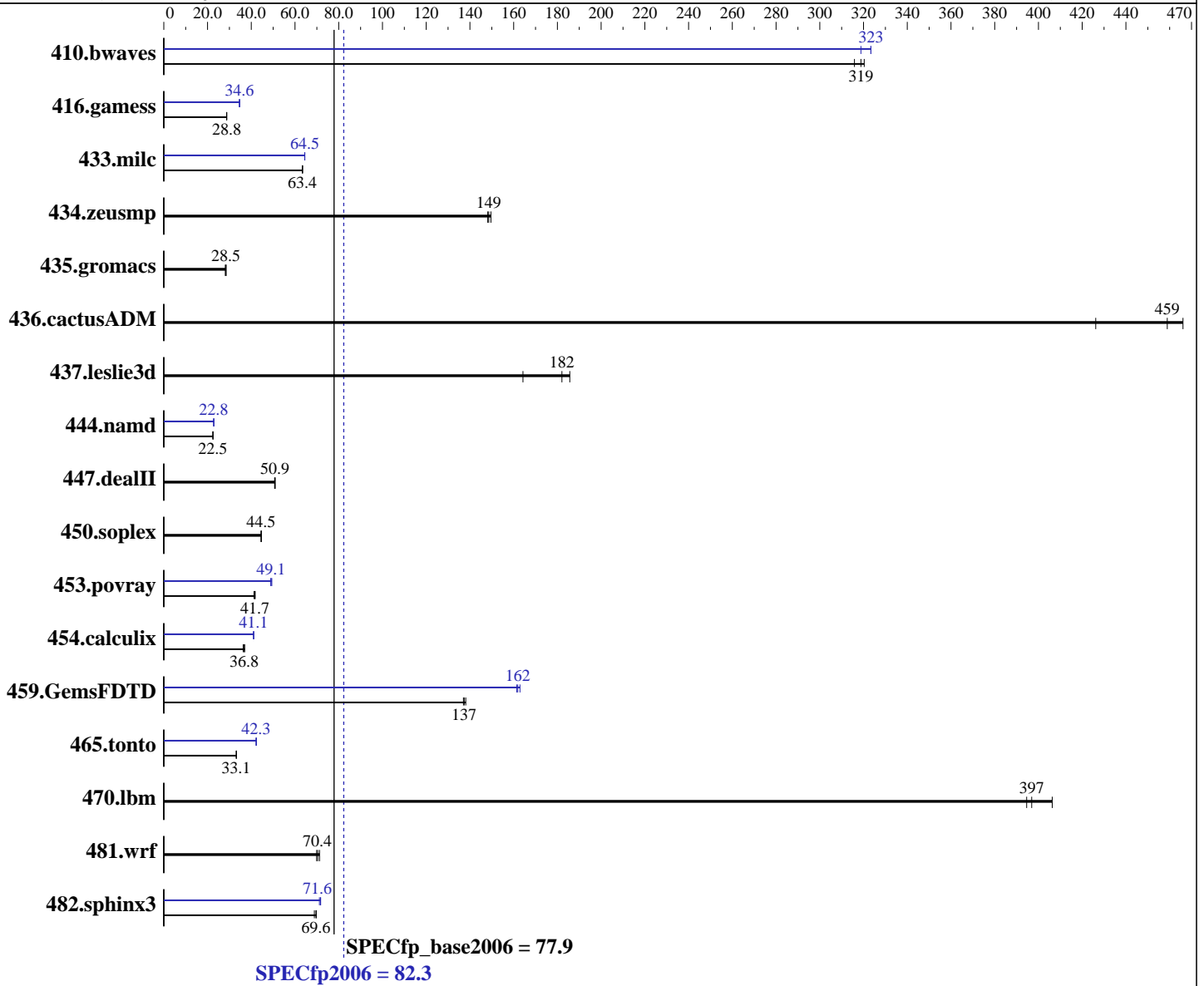
Test date: Mar-2012

Test sponsor: Fujitsu

Hardware Availability: Jun-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: 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	43.0	316	42.4	320	<u>42.6</u>	<u>319</u>	42.0	323	42.6	319	<u>42.0</u>	<u>323</u>
416.gamess	<u>681</u>	<u>28.8</u>	680	28.8	682	28.7	<u>566</u>	<u>34.6</u>	564	34.7	566	34.6
433.milc	145	63.4	<u>145</u>	<u>63.4</u>	145	63.5	142	64.5	<u>142</u>	<u>64.5</u>	142	64.4
434.zeusmp	61.4	148	<u>61.2</u>	<u>149</u>	60.8	150	61.4	148	<u>61.2</u>	<u>149</u>	60.8	150
435.gromacs	254	28.1	251	28.5	<u>251</u>	<u>28.5</u>	254	28.1	251	28.5	<u>251</u>	<u>28.5</u>
436.cactusADM	28.0	426	25.6	466	<u>26.0</u>	<u>459</u>	28.0	426	25.6	466	<u>26.0</u>	<u>459</u>
437.leslie3d	57.2	164	50.6	186	<u>51.6</u>	<u>182</u>	57.2	164	50.6	186	<u>51.6</u>	<u>182</u>
444.namd	<u>357</u>	<u>22.5</u>	357	22.5	357	22.5	351	22.8	351	22.9	<u>351</u>	<u>22.8</u>
447.dealII	225	50.9	<u>225</u>	<u>50.9</u>	226	50.7	225	50.9	<u>225</u>	<u>50.9</u>	226	50.7
450.soplex	187	44.5	<u>187</u>	<u>44.5</u>	187	44.6	187	44.5	<u>187</u>	<u>44.5</u>	187	44.6
453.povray	127	41.8	129	41.3	<u>128</u>	<u>41.7</u>	<u>108</u>	<u>49.1</u>	109	48.9	108	49.4
454.calculix	223	37.0	<u>224</u>	<u>36.8</u>	227	36.3	<u>201</u>	<u>41.1</u>	201	41.1	201	41.1
459.GemsFDTD	76.8	138	<u>77.2</u>	<u>137</u>	77.4	137	65.1	163	<u>65.5</u>	<u>162</u>	65.7	161
465.tonto	<u>297</u>	<u>33.1</u>	296	33.3	297	33.1	<u>233</u>	<u>42.3</u>	232	42.4	233	42.2
470.lbm	<u>34.6</u>	<u>397</u>	34.8	395	33.8	406	<u>34.6</u>	<u>397</u>	34.8	395	33.8	406
481.wrf	157	71.2	160	69.9	<u>159</u>	<u>70.4</u>	157	71.2	160	69.9	<u>159</u>	<u>70.4</u>
482.sphinx3	<u>280</u>	<u>69.6</u>	279	69.7	283	68.9	274	71.2	272	71.7	<u>272</u>	<u>71.6</u>

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"
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled

Platform Notes

BIOS configuration:
 Intel HT Technology = Disable



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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"

OMP_NUM_THREADS = "16"

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

This result was measured on the PRIMERGY CX250 S1. The PRIMERGY CX250 S1 and the PRIMERGY CX270 S1 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.dealII: 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/Intel-ic12.1-official-linux64.20111122.html>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120313.01.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-ic12.1-official-linux64.20111122.xml>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120313.01.xml>

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

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