



SPEC® CINT2006 Result

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Fujitsu

SPECint®2006 = 56.9

PRIMERGY CX250 S2, Intel Xeon E5-2650 v2, 2.60 GHz

SPECint_base2006 = 52.7

CPU2006 license: 19

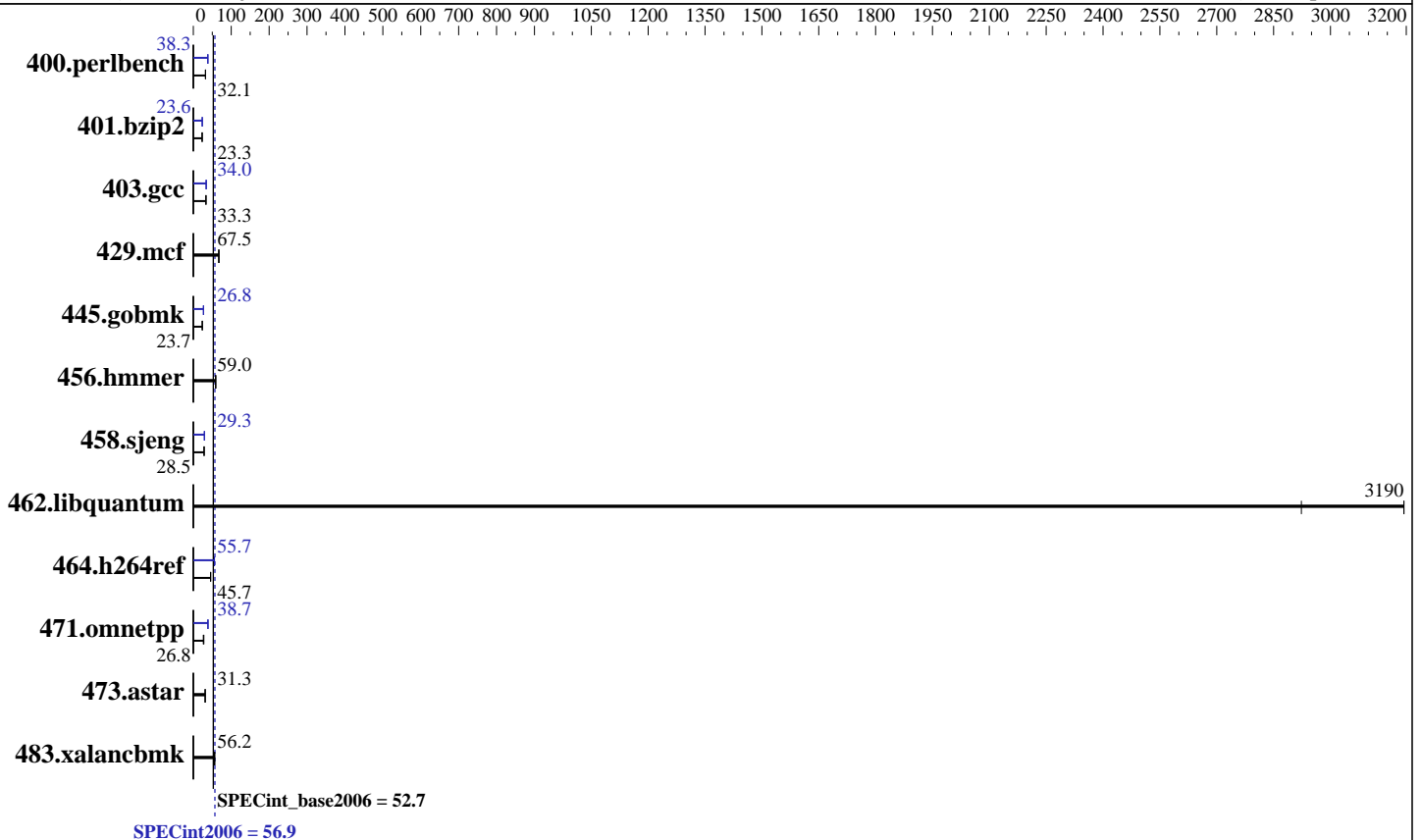
Test date: Nov-2013

Test sponsor: Fujitsu

Hardware Availability: Sep-2013

Tested by: Fujitsu

Software Availability: Sep-2013



Hardware

CPU Name: Intel Xeon E5-2650 v2
 CPU Characteristics: Intel Turbo Boost Technology up to 3.40 GHz
 CPU MHz: 2600
 FPU: Integrated
 CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core
 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
 L3 Cache: 20 MB I+D on chip per chip
 Other Cache: None
 Memory: 128 GB (16 x 8 GB 2Rx8 PC3-14900R-13, ECC)
 Disk Subsystem: 1 x SATA, 500 GB, 7200 RPM
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)
 2.6.32-358.11.1.el6.x86_64
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4
 System State: Run level 5 (multi-user)
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V10.0



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	304	32.1	304	32.1	304	32.1	<u>255</u>	<u>38.3</u>	255	38.3	256	38.2
401.bzip2	<u>415</u>	<u>23.3</u>	415	23.3	415	23.3	<u>409</u>	<u>23.6</u>	409	23.6	409	23.6
403.gcc	<u>242</u>	<u>33.3</u>	242	33.2	241	33.3	237	34.0	<u>237</u>	<u>34.0</u>	237	34.0
429.mcf	<u>135</u>	<u>67.5</u>	135	67.7	136	66.9	<u>135</u>	<u>67.5</u>	135	67.7	136	66.9
445.gobmk	<u>443</u>	<u>23.7</u>	443	23.7	443	23.7	391	26.8	<u>392</u>	<u>26.8</u>	392	26.8
456.hammer	158	58.9	158	59.1	<u>158</u>	<u>59.0</u>	158	58.9	158	59.1	<u>158</u>	<u>59.0</u>
458.sjeng	425	28.5	425	28.4	<u>425</u>	<u>28.5</u>	<u>413</u>	<u>29.3</u>	413	29.3	414	29.3
462.libquantum	<u>6.49</u>	<u>3190</u>	7.09	2920	6.49	3190	<u>6.49</u>	<u>3190</u>	7.09	2920	6.49	3190
464.h264ref	<u>485</u>	<u>45.7</u>	486	45.5	484	45.7	<u>397</u>	<u>55.7</u>	397	55.7	397	55.7
471.omnetpp	235	26.6	225	27.8	<u>233</u>	<u>26.8</u>	161	38.7	<u>162</u>	<u>38.7</u>	163	38.3
473.astar	225	31.2	224	31.4	<u>224</u>	<u>31.3</u>	225	31.2	224	31.4	<u>224</u>	<u>31.3</u>
483.xalancbmk	<u>123</u>	<u>56.2</u>	123	56.1	123	56.3	<u>123</u>	<u>56.2</u>	123	56.1	123	56.3

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

Submit Notes

The config file option 'submit' was used.

Operating System Notes

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

Platform Notes

BIOS configuration:
Energy Performance = Performance
Utilization Profile = Unbalanced

General Notes

Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact,1,0"
LD_LIBRARY_PATH = "/SPECcpu2006/libs/32:/SPECcpu2006/libs/64:/SPECcpu2006/sh"
OMP_NUM_THREADS = "16"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RedHat EL 6.4
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>

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General Notes (Continued)

For information about Fujitsu please visit: <http://www.fujitsu.com>

Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:

-xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:

-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -Wl,-z,muldefs
-L/sh -lsmartheap64

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca



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Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

400.perlbench: icc -m32

445.gobmk: icc -m32

464.h264ref: icc -m32

C++ benchmarks (except as noted below):

icpc -m64

471.omnetpp: icpc -m32

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
456.hmmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch
-ansi-alias

401.bzip2: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div -prof-use(pass 2) -auto-ilp32 -opt-prefetch
-ansi-alias

403.gcc: -xAVX -ipo -O3 -no-prec-div -inline-calloc
-opt-malloc-options=3 -auto-ilp32

429.mcf: basepeak = yes

445.gobmk: -xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias

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Peak Optimization Flags (Continued)

456.hmmcr: basepeak = yes

458.sjeng: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4

462.libquantum: basepeak = yes

464.h264ref: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2
-ansi-alias

C++ benchmarks:

471.omnetpp: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2)
-opt-ra-region-strategy=block -ansi-alias
-Wl,-z,muldefs -L/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.html>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20131009.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>

<http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20131009.xml>

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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 Thu Jul 24 18:22:36 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 3 December 2013.

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