



SPEC® CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

NEC Corporation

SPECint®2006 = 46.5

Express5800/GT110h (Intel Celeron G3900)

SPECint_base2006 = 45.0

CPU2006 license: 9006

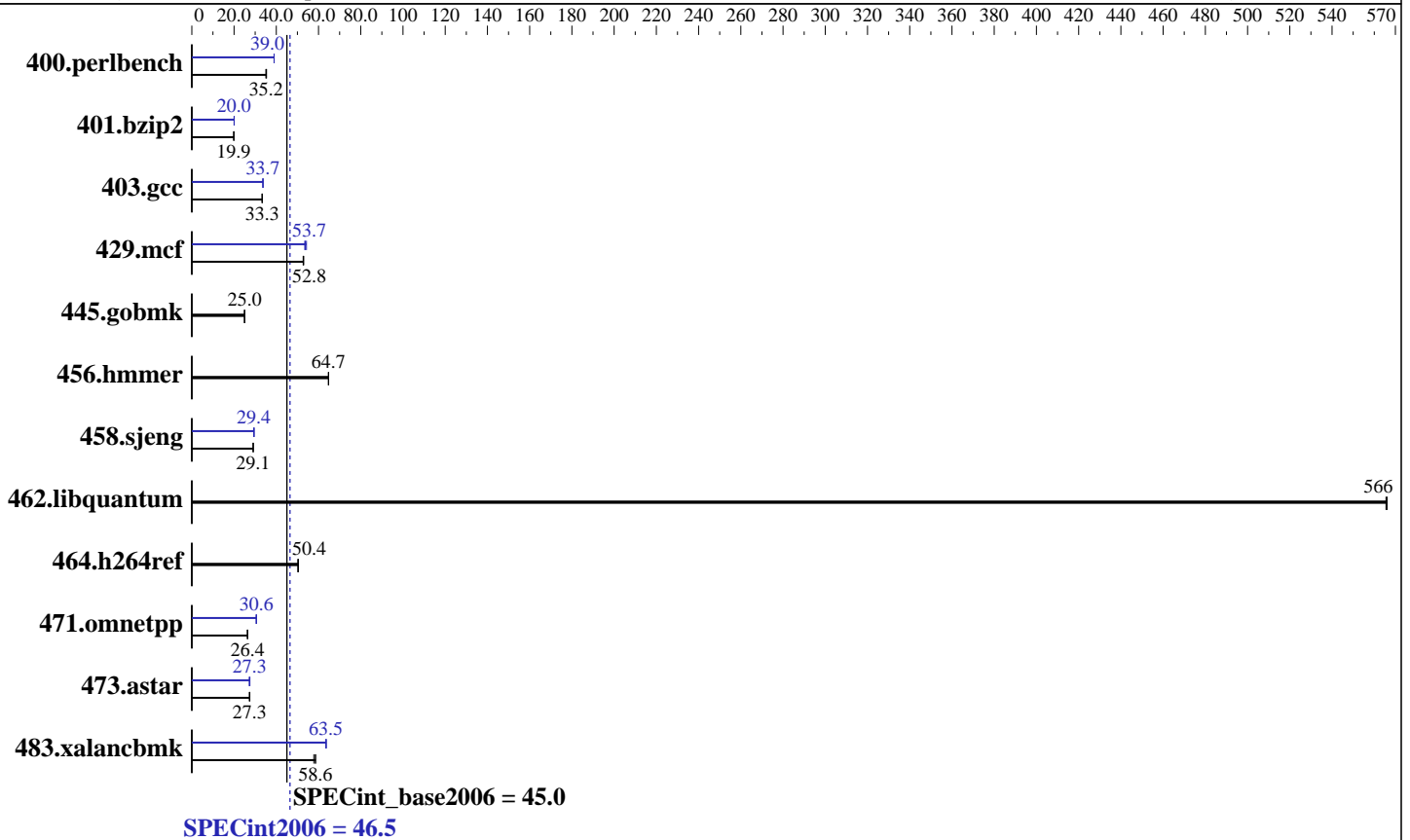
Test date: Jul-2016

Test sponsor: NEC Corporation

Hardware Availability: Jul-2016

Tested by: NEC Corporation

Software Availability: Jan-2016



Hardware

CPU Name: Intel Celeron G3900
 CPU Characteristics:
 CPU MHz: 2800
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
 CPU(s) orderable: 1 chip
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 2 MB I+D on chip per chip
 Other Cache: None
 Memory: 16 GB (2 x 8 GB 2Rx8 PC4-2133P-E)
 Disk Subsystem: 1 x 1 TB SATA, 7200 RPM
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 7.2 (Maipo)
 Kernel 3.10.0-327.4.5.el7.x86_64
 Compiler: C/C++: Version 16.0.0.101 of Intel C++ Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4
 System State: Run level 3 (multi-user)
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V10.2



SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

NEC Corporation

SPECint2006 = 46.5

Express5800/GT110h (Intel Celeron G3900)

SPECint_base2006 = 45.0

CPU2006 license: 9006

Test date: Jul-2016

Test sponsor: NEC Corporation

Hardware Availability: Jul-2016

Tested by: NEC Corporation

Software Availability: Jan-2016

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	276	35.4	<u>278</u>	<u>35.2</u>	278	35.1	251	39.0	<u>251</u>	<u>39.0</u>	251	39.0
401.bzip2	485	19.9	485	19.9	<u>485</u>	<u>19.9</u>	482	20.0	<u>482</u>	<u>20.0</u>	481	20.1
403.gcc	241	33.4	242	33.3	<u>242</u>	<u>33.3</u>	239	33.7	239	33.7	<u>239</u>	<u>33.7</u>
429.mcf	172	53.0	<u>173</u>	<u>52.8</u>	173	52.7	168	54.3	<u>170</u>	<u>53.7</u>	170	53.5
445.gobmk	420	25.0	<u>420</u>	<u>25.0</u>	420	25.0	420	25.0	<u>420</u>	<u>25.0</u>	420	25.0
456.hammer	<u>144</u>	<u>64.7</u>	144	64.8	144	64.7	<u>144</u>	<u>64.7</u>	144	64.8	144	64.7
458.sjeng	<u>416</u>	<u>29.1</u>	416	29.1	417	29.0	411	29.4	411	29.4	<u>411</u>	<u>29.4</u>
462.libquantum	36.6	566	36.6	566	<u>36.6</u>	<u>566</u>	36.6	566	36.6	566	<u>36.6</u>	<u>566</u>
464.h264ref	438	50.5	<u>439</u>	<u>50.4</u>	441	50.2	438	50.5	<u>439</u>	<u>50.4</u>	441	50.2
471.omnetpp	<u>237</u>	<u>26.4</u>	237	26.3	237	26.4	204	30.6	<u>205</u>	<u>30.6</u>	205	30.5
473.astar	<u>257</u>	<u>27.3</u>	257	27.3	256	27.5	255	27.5	258	27.2	<u>257</u>	<u>27.3</u>
483.xalancbmk	119	57.8	118	58.6	<u>118</u>	<u>58.6</u>	<u>109</u>	<u>63.5</u>	108	63.7	109	63.5

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 Settings:
Power Management Policy: Custom
Energy Performance: Performance

General Notes

Environment variables set by runspec before the start of the run:

KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh"
OMP_NUM_THREADS = "2"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7.1

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



SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

NEC Corporation

SPECint2006 = 46.5

Express5800/GT110h (Intel Celeron G3900)

SPECint_base2006 = 45.0

CPU2006 license: 9006

Test date: Jul-2016

Test sponsor: NEC Corporation

Hardware Availability: Jul-2016

Tested by: NEC Corporation

Software Availability: Jan-2016

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:

-xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh -lsmartheap64

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

NEC Corporation

SPECint2006 = 46.5

Express5800/GT110h (Intel Celeron G3900)

SPECint_base2006 = 45.0

CPU2006 license: 9006

Test date: Jul-2016

Test sponsor: NEC Corporation

Hardware Availability: Jul-2016

Tested by: NEC Corporation

Software Availability: Jan-2016

Peak Compiler Invocation (Continued)

400.perlbench: icc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin

C++ benchmarks (except as noted below):

icpc -m32 -L/opt/intel/compilers_and_libraries_2016/linux/compiler/lib/ia32_lin

473.astar: icpc -m64

Peak Portability Flags

400.perlbench: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX_IA32
 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: -D_FILE_OFFSET_BITS=64
 473.astar: -DSPEC_CPU_LP64
 483.xalancbmk: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(pass 2) -prof-gen:threadsafe(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1)
-prof-use(pass 2) -opt-prefetch -ansi-alias

401.bzip2: -xSSE4.2(pass 2) -prof-gen:threadsafe(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div -par-num-threads=1(pass 1)
-prof-use(pass 2) -auto-ilp32 -opt-prefetch -ansi-alias

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -inline-calloc
-opt-malloc-options=3 -auto-ilp32

429.mcf: -xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch
-auto-p32

445.gobmk: basepeak = yes

456.hmmer: basepeak = yes

458.sjeng: -xSSE4.2(pass 2) -prof-gen:threadsafe(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1)
-prof-use(pass 2) -unroll4

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2016 Standard Performance Evaluation Corporation

NEC Corporation

SPECint2006 = 46.5

Express5800/GT110h (Intel Celeron G3900)

SPECint_base2006 = 45.0

CPU2006 license: 9006

Test date: Jul-2016

Test sponsor: NEC Corporation

Hardware Availability: Jul-2016

Tested by: NEC Corporation

Software Availability: Jan-2016

Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen:threadsafe(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -par-num-threads=1(pass 1)
-prof-use(pass 2) -opt-ra-region-strategy=block
-ansi-alias -Wl,-z,muldefs -L/sh -lsmarheap

473.astar: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh -lsmarheap64

483.xalancbmk: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias
-Wl,-z,muldefs -L/sh -lsmarheap

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-ic16.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-110h-RevA.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-110h-RevA.xml>

SPEC and SPECint 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 Sep 6 16:55:17 2016 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 6 September 2016.