



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECint®2006 = 36.2

Express5800/R110e-1E (Intel Pentium G640)

SPECint_base2006 = 34.5

CPU2006 license: 9006

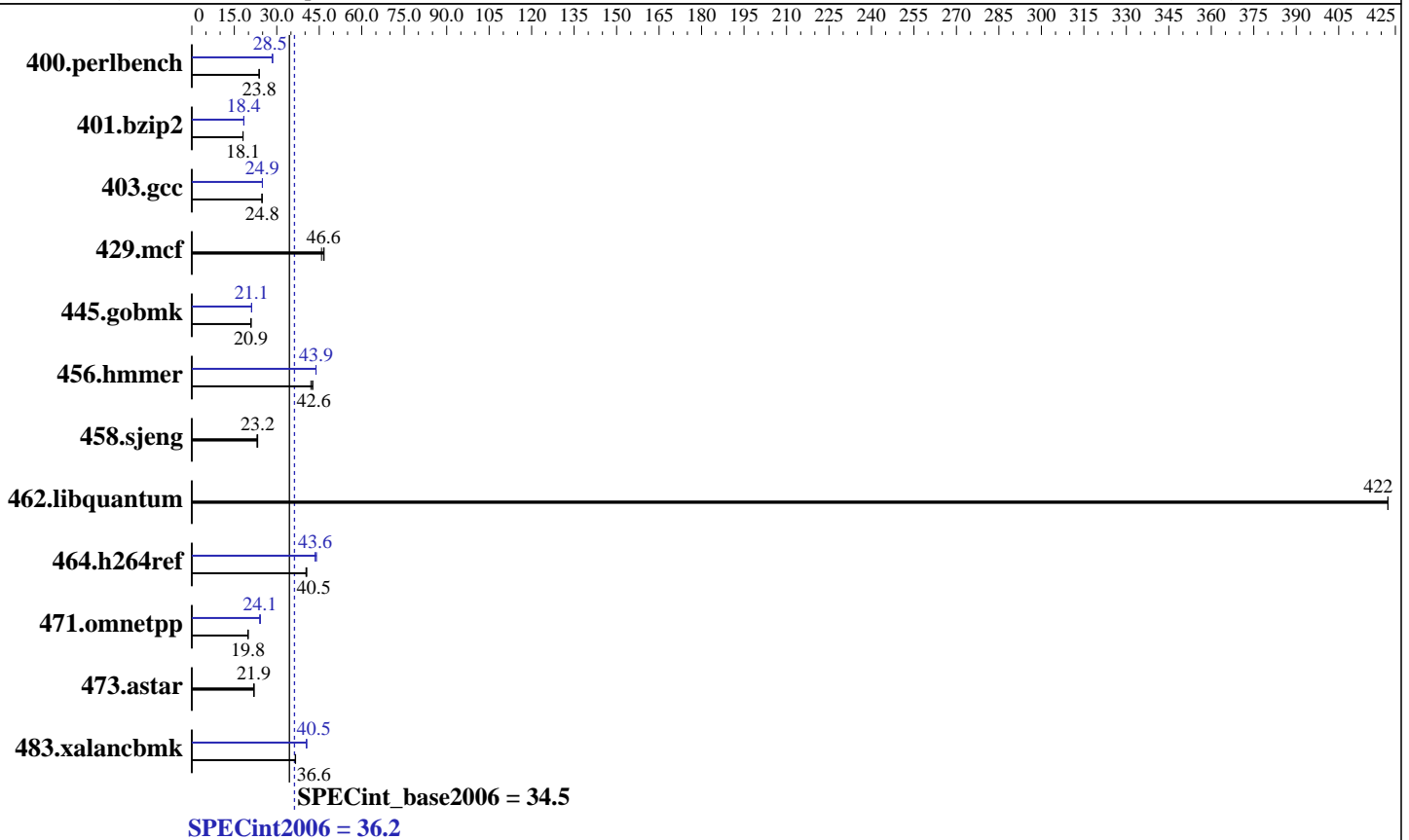
Test date: Jul-2012

Test sponsor: NEC Corporation

Hardware Availability: Jul-2012

Tested by: NEC Corporation

Software Availability: Feb-2012



Hardware

CPU Name: Intel Pentium G640
 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: 3 MB I+D on chip per chip
 Other Cache: None
 Memory: 16 GB (2 x 8 GB 2Rx8 PC3L-12800E-11, ECC, running at 1066 MHz and CL7)
 Disk Subsystem: 1 x 500 GB SATA, 7200 RPM
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.2 (Santiago)
 Kernel 2.6.32-220.el6.x86_64
 Compiler: C/C++: Version 12.1.3.293 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 V8.1



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECint2006 = 36.2

Express5800/R110e-1E (Intel Pentium G640)

SPECint_base2006 = 34.5

CPU2006 license: 9006

Test date: Jul-2012

Test sponsor: NEC Corporation

Hardware Availability: Jul-2012

Tested by: NEC Corporation

Software Availability: Feb-2012

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	411	23.8	411	23.8	411	23.8	344	28.4	343	28.5	343	28.5
401.bzip2	533	18.1	535	18.0	534	18.1	525	18.4	525	18.4	525	18.4
403.gcc	324	24.8	324	24.8	325	24.7	323	24.9	323	24.9	323	24.9
429.mcf	195	46.7	196	46.6	199	45.8	195	46.7	196	46.6	199	45.8
445.gobmk	502	20.9	502	20.9	503	20.9	497	21.1	497	21.1	497	21.1
456.hammer	219	42.6	222	42.0	219	42.7	213	43.9	213	43.8	213	43.9
458.sjeng	521	23.2	521	23.2	526	23.0	521	23.2	521	23.2	526	23.0
462.libquantum	49.1	422	49.1	422	49.1	422	49.1	422	49.1	422	49.1	422
464.h264ref	549	40.3	547	40.5	546	40.6	503	44.0	507	43.6	508	43.6
471.omnetpp	315	19.8	315	19.8	314	19.9	258	24.2	260	24.0	260	24.1
473.astar	321	21.9	320	21.9	319	22.0	321	21.9	320	21.9	319	22.0
483.xalancbmk	188	36.6	189	36.5	188	36.6	170	40.5	170	40.5	170	40.5

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

Default BIOS settings were used.

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"

OMP_NUM_THREADS = "2"

Added glibc-static-2.12-1.47.el6.x86_64.rpm
to enable static linking

Transparent Huge Pages enabled with:

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

Base Compiler Invocation

C benchmarks:

icc -m64

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/

Page 2



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECint2006 = 36.2

Express5800/R110e-1E (Intel Pentium G640)

SPECint_base2006 = 34.5

CPU2006 license: 9006

Test date: Jul-2012

Test sponsor: NEC Corporation

Hardware Availability: Jul-2012

Tested by: NEC Corporation

Software Availability: Feb-2012

Base Compiler Invocation (Continued)

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.hmmr: -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/opt/SmartHeap_8.1/lib64 -lsmartheap64

Base Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m64

400.perlbench: icc -m32

445.gobmk: icc -m32

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECint2006 = 36.2

Express5800/R110e-1E (Intel Pentium G640)

SPECint_base2006 = 34.5

CPU2006 license: 9006

Test date: Jul-2012

Test sponsor: NEC Corporation

Hardware Availability: Jul-2012

Tested by: NEC Corporation

Software Availability: Feb-2012

Peak Compiler Invocation (Continued)

464.h264ref: icc -m32

C++ benchmarks (except as noted below):

icpc -m32

473.astar: icpc -m64

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.hmmer: -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_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(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: -xSSE4.2(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: -xSSE4.2 -ipo -O3 -no-prec-div -inline-alloc
 -opt-malloc-options=3 -auto-ilp32

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
 -ansi-alias

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
 -ansi-alias

458.sjeng: basepeak = yes

462.libquantum: basepeak = yes

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECint2006 = 36.2

Express5800/R110e-1E (Intel Pentium G640)

SPECint_base2006 = 34.5

CPU2006 license: 9006

Test date: Jul-2012

Test sponsor: NEC Corporation

Hardware Availability: Jul-2012

Tested by: NEC Corporation

Software Availability: Feb-2012

Peak Optimization Flags (Continued)

464.h264ref: -xSSE4.2(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: -xSSE4.2(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/opt/SmartHeap_8.1/lib -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias
-Wl,-z,muldefs -L/opt/SmartHeap_8.1/lib -lsmartheap

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-ic12.1-official-linux64.20120425.html>

<http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-R120d-RevA.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120425.xml>

<http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-R120d-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 Thu Jul 24 10:47:20 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 29 August 2012.