



SPEC[®] CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint[®]_rate2006 = 60.3

IBM System x3100 M4 (Intel Pentium G620)

SPECint_rate_base2006 = 58.0

CPU2006 license: 11

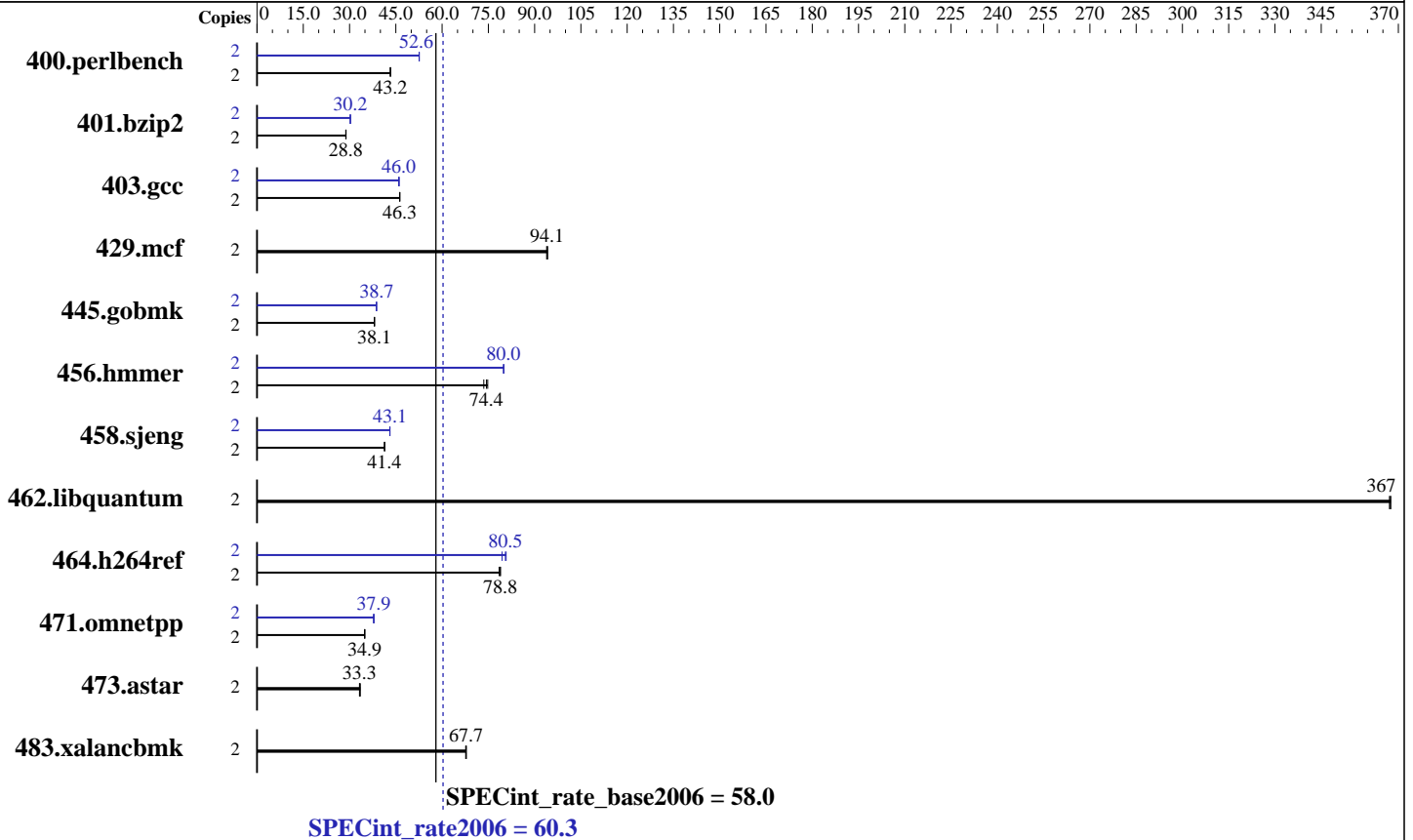
Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Nov-2011

Hardware Availability: Oct-2011

Software Availability: Aug-2011



Hardware

CPU Name: Intel Pentium G620
 CPU Characteristics:
 CPU MHz: 2600
 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 PC3-10600E-9, ECC, running at 1066 MHz)
 Disk Subsystem: 1 x 250 GB SATA, 7200 RPM
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server Release 6.1, Kernel 2.6.32-131.0.15.el6.x86_64
 Compiler: C/C++: Version 12.1.0.225 of Intel Compiler XE Build 20110803
 Auto Parallel: No
 File System: ext4
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V9.01



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint_rate2006 = 60.3

IBM System x3100 M4 (Intel Pentium G620)

SPECint_rate_base2006 = 58.0

CPU2006 license: 11

Test date: Nov-2011

Test sponsor: IBM Corporation

Hardware Availability: Oct-2011

Tested by: IBM Corporation

Software Availability: Aug-2011

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	2	452	43.2	<u>452</u>	<u>43.2</u>	451	43.3	2	372	52.6	372	52.6	<u>372</u>	<u>52.6</u>
401.bzip2	2	670	28.8	<u>670</u>	<u>28.8</u>	668	28.9	2	637	30.3	638	30.2	<u>638</u>	<u>30.2</u>
403.gcc	2	348	46.3	<u>348</u>	<u>46.3</u>	348	46.2	2	349	46.1	<u>350</u>	<u>46.0</u>	350	45.9
429.mcf	2	<u>194</u>	<u>94.1</u>	194	94.2	194	93.9	2	<u>194</u>	<u>94.1</u>	194	94.2	194	93.9
445.gobmk	2	<u>551</u>	<u>38.1</u>	551	38.1	552	38.0	2	541	38.7	542	38.7	<u>542</u>	<u>38.7</u>
456.hammer	2	<u>251</u>	<u>74.4</u>	254	73.5	249	74.8	2	233	79.9	233	80.0	<u>233</u>	<u>80.0</u>
458.sjeng	2	<u>585</u>	<u>41.4</u>	585	41.4	585	41.3	2	<u>562</u>	<u>43.1</u>	562	43.1	561	43.1
462.libquantum	2	113	367	<u>113</u>	<u>367</u>	113	368	2	113	367	<u>113</u>	<u>367</u>	113	368
464.h264ref	2	564	78.5	561	78.9	<u>561</u>	<u>78.8</u>	2	557	79.4	548	80.8	<u>550</u>	<u>80.5</u>
471.omnetpp	2	359	34.8	358	35.0	<u>358</u>	<u>34.9</u>	2	330	37.9	331	37.8	<u>330</u>	<u>37.9</u>
473.astar	2	419	33.5	423	33.2	<u>422</u>	<u>33.3</u>	2	419	33.5	423	33.2	<u>422</u>	<u>33.3</u>
483.xalancbmk	2	<u>204</u>	<u>67.7</u>	203	67.9	204	67.6	2	<u>204</u>	<u>67.7</u>	203	67.9	204	67.6

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.
taskset was used to bind copies to the cores

Platform Notes

BIOS Settings:
C-State enabled in BIOS

General Notes

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

```
LD_LIBRARY_PATH = "/root/SPECcpu12.1/smartheap:/root/SPECcpu12.1/ic12.1-libs/ia32:/root/SPECcpu12.1/ic12.1-libs/intel64"
```

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
memory using RHEL5.5 with binutils-2.17.50.0.6-14.el5

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

Transparent Huge Pages enabled with:

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

Filesystem page cache cleared with:

```
echo 1 > /proc/sys/vm/drop_caches
```

runspec command invoked through numactl i.e.:

```
numactl --interleave=all runspec <etc>
```



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint_rate2006 = 60.3

IBM System x3100 M4 (Intel Pentium G620)

SPECint_rate_base2006 = 58.0

CPU2006 license: 11

Test date: Nov-2011

Test sponsor: IBM Corporation

Hardware Availability: Oct-2011

Tested by: IBM Corporation

Software Availability: Aug-2011

Base Compiler Invocation

C benchmarks:

icc -m32

C++ benchmarks:

icpc -m32

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3
-Wl,-z,muldefs -L/smartheap -lsmartheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:

icpc -m32



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint_rate2006 = 60.3

IBM System x3100 M4 (Intel Pentium G620)

SPECint_rate_base2006 = 58.0

CPU2006 license: 11

Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Nov-2011

Hardware Availability: Oct-2011

Software Availability: Aug-2011

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
 401.bzip2: -DSPEC_CPU_LP64
 456.hmmer: -DSPEC_CPU_LP64
 458.sjeng: -DSPEC_CPU_LP64
 462.libquantum: -DSPEC_CPU_LINUX
 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)
 -auto-ilp32

401.bzip2: -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 -auto-ilp32 -ansi-alias

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
 -ansi-alias -opt-mem-layout-trans=3

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

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
 -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
 -unroll4 -auto-ilp32

462.libquantum: basepeak = yes

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)
 -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
 -L/smartheap -lsmartheap

473.astar: basepeak = yes

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint_rate2006 = 60.3

IBM System x3100 M4 (Intel Pentium G620)

SPECint_rate_base2006 = 58.0

CPU2006 license: 11

Test date: Nov-2011

Test sponsor: IBM Corporation

Hardware Availability: Oct-2011

Tested by: IBM Corporation

Software Availability: Aug-2011

Peak Optimization Flags (Continued)

483.xalanbmk: 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-ic12.1-linux64.html>

<http://www.spec.org/cpu2006/flags/IBM-platform-linux64-revB.20111206.html>

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

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

<http://www.spec.org/cpu2006/flags/IBM-platform-linux64-revB.20111206.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 v1.1.

Report generated on Thu Jul 24 00:49:18 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 7 December 2011.