



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint®2006 = 27.6

IBM System x3650 (Intel Xeon X5460)

SPECint_base2006 = 24.0

CPU2006 license: 11

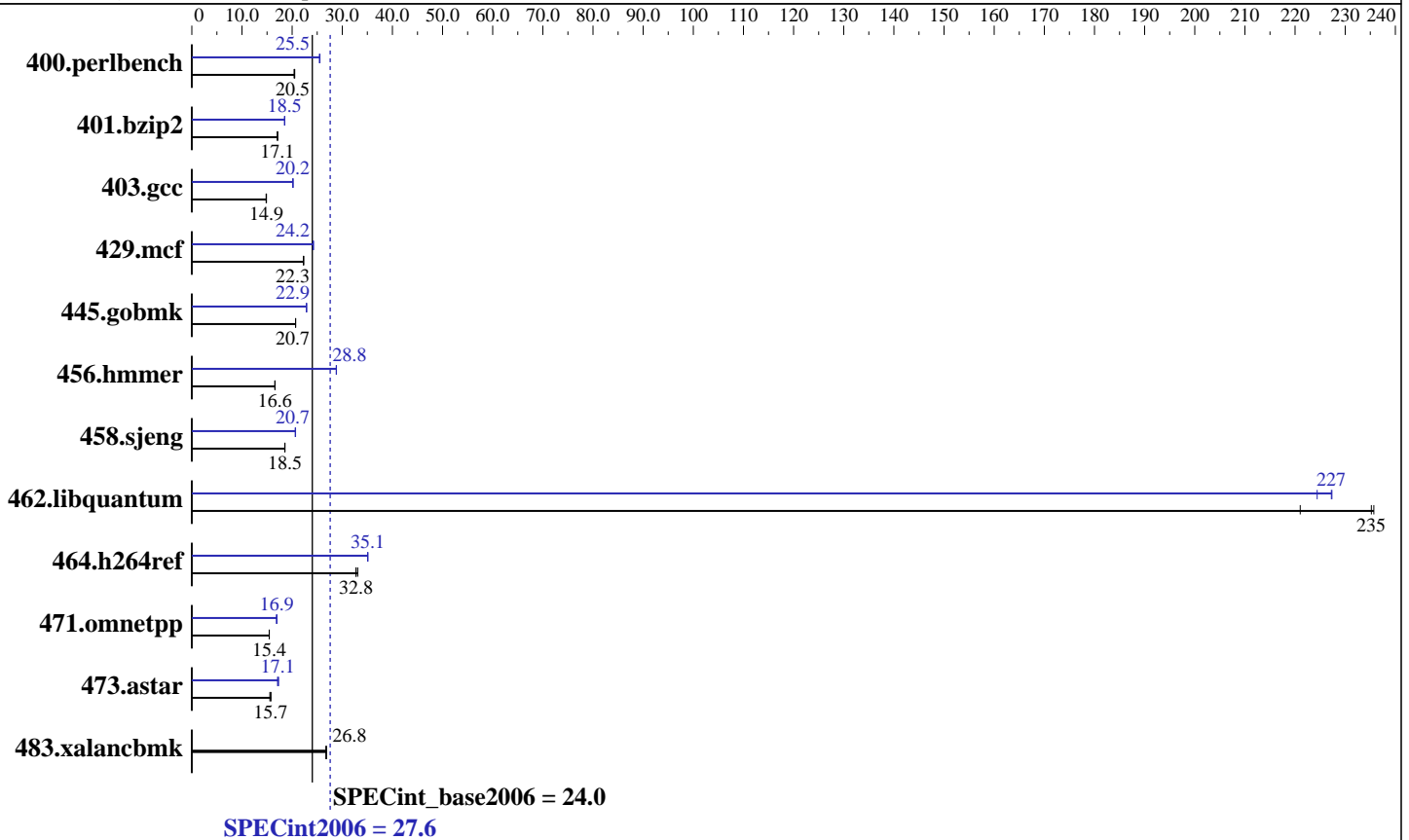
Test date: Nov-2007

Test sponsor: IBM Corporation

Hardware Availability: Jan-2008

Tested by: IBM Corporation

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon X5460
 CPU Characteristics: 1333MHz system bus
 CPU MHz: 3158
 FPU: Integrated
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 12 MB I+D on chip per chip, 6 MB shared / 2 cores
 L3 Cache: None
 Other Cache: None
 Memory: 16 GB (8 x 2 GB DDR2-5300F ECC)
 Disk Subsystem: 1 x 36 GB SAS, 15000 RPM
 Other Hardware: None

Software

Operating System: SLES10 (x86_64), 2.6.16.21-0.8-smp
 Compiler: Intel C++ Compiler 10.1 for Linux
 Build 20070913 Package ID: 1_cc_p_10.1.008
 Auto Parallel: Yes
 File System: ReiserFS
 System State: Multi-user, run level 3
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: MicroQuill SmartHeap 8.1
 Binutils 2.17.50.0.15



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint2006 = 27.6

IBM System x3650 (Intel Xeon X5460)

SPECint_base2006 = 24.0

CPU2006 license: 11

Test date: Nov-2007

Test sponsor: IBM Corporation

Hardware Availability: Jan-2008

Tested by: IBM Corporation

Software Availability: Nov-2007

Results Table

| Benchmark | Base | | | | | | Peak | | | | | |
|----------------|-------------------|--------------------|--------------------|--------------------|-------------------|--------------------|--------------------|--------------------|-------------------|--------------------|-------------------|--------------------|
| | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 400.perlbench | 479 | 20.4 | <u>477</u> | <u>20.5</u> | 476 | 20.5 | <u>382</u> | <u>25.6</u> | <u>383</u> | <u>25.5</u> | 384 | 25.5 |
| 401.bzip2 | 565 | 17.1 | 564 | 17.1 | <u>565</u> | <u>17.1</u> | <u>521</u> | <u>18.5</u> | 521 | 18.5 | 522 | 18.5 |
| 403.gcc | <u>542</u> | <u>14.9</u> | 544 | 14.8 | 541 | 14.9 | 400 | 20.1 | 399 | 20.2 | <u>399</u> | <u>20.2</u> |
| 429.mcf | 409 | 22.3 | 410 | 22.3 | <u>409</u> | <u>22.3</u> | <u>376</u> | <u>24.2</u> | 376 | 24.3 | 377 | 24.2 |
| 445.gobmk | 507 | 20.7 | <u>507</u> | <u>20.7</u> | 507 | 20.7 | 459 | 22.9 | <u>459</u> | <u>22.9</u> | 459 | 22.9 |
| 456.hmmmer | 562 | 16.6 | 564 | 16.6 | <u>562</u> | <u>16.6</u> | <u>324</u> | <u>28.8</u> | 323 | 28.8 | 324 | 28.8 |
| 458.sjeng | <u>652</u> | <u>18.5</u> | 651 | 18.6 | 653 | 18.5 | <u>586</u> | <u>20.7</u> | 586 | 20.6 | 585 | 20.7 |
| 462.libquantum | 87.9 | 236 | <u>88.1</u> | <u>235</u> | 93.7 | 221 | <u>91.2</u> | <u>227</u> | 92.3 | 224 | 91.1 | 227 |
| 464.h264ref | 676 | 32.7 | 669 | 33.1 | <u>676</u> | <u>32.8</u> | 631 | 35.0 | <u>631</u> | <u>35.1</u> | 630 | 35.1 |
| 471.omnetpp | 405 | 15.4 | 404 | 15.5 | <u>405</u> | <u>15.4</u> | <u>369</u> | <u>16.9</u> | 370 | 16.9 | 369 | 17.0 |
| 473.astar | 451 | 15.6 | <u>447</u> | <u>15.7</u> | 445 | 15.8 | 406 | 17.3 | 410 | 17.1 | <u>410</u> | <u>17.1</u> |
| 483.xalancbmk | 257 | 26.8 | 258 | 26.8 | <u>258</u> | <u>26.8</u> | 257 | 26.8 | 258 | 26.8 | <u>258</u> | <u>26.8</u> |

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

General Notes

All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmmer, for peak, are compiled in 64-bit mode
Hardware Sector Prefetch Enabled and Adjacent Sector Prefetch Enabled
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to physical,0
KMP_STACKSIZE set to null
Powersaved dameon was disabled in OS

Base Compiler Invocation

C benchmarks:

icc

C++ benchmarks:

icpc

Base Portability Flags

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



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint2006 = 27.6

IBM System x3650 (Intel Xeon X5460)

SPECint_base2006 = 24.0

CPU2006 license: 11

Test date: Nov-2007

Test sponsor: IBM Corporation

Hardware Availability: Jan-2008

Tested by: IBM Corporation

Software Availability: Nov-2007

Base Optimization Flags

C benchmarks:

-fast -vec-guard-write -parallel -par-runtime-control

C++ benchmarks:

-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/spec/users/rahul/cpu2006.1.0/lib -lsmartheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc

401.bzip2: /opt/intel/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/include

456.hmmer: /opt/intel/cce/10.1.008/bin/icc
-L/opt/intel/cce/10.1.008/lib
-I/opt/intel/cce/10.1.008/include

C++ benchmarks:

icpc

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint2006 = 27.6

IBM System x3650 (Intel Xeon X5460)

SPECint_base2006 = 24.0

CPU2006 license: 11

Test date: Nov-2007

Test sponsor: IBM Corporation

Hardware Availability: Jan-2008

Tested by: IBM Corporation

Software Availability: Nov-2007

Peak Optimization Flags (Continued)

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -ansi-alias
-prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-auto-ilp32

403.gcc: -fast -inline-calloc -opt-malloc-options=3

429.mcf: -fast -prefetch

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xT -O2 -ipo
-no-prec-div -ansi-alias

456.hmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive
-auto-ilp32

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

462.libquantum: -fast -unroll4 -Ob0 -prefetch
-opt-streaming-stores always -vec-guard-write
-opt-malloc-options=3 -parallel -par-runtime-control

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
-no-prec-div -ansi-alias -opt-ra-region-strategy=block
-Wl,-z,muldefs
-L/spec/users/rahul/cpu2006.1.0/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine
-Wl,-z,muldefs
-L/spec/users/rahul/cpu2006.1.0/lib -lsmartheap

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint2006 = 27.6

IBM System x3650 (Intel Xeon X5460)

SPECint_base2006 = 24.0

CPU2006 license: 11

Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Nov-2007

Hardware Availability: Jan-2008

Software Availability: Nov-2007

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.14.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090714.14.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 v1.0.
Report generated on Tue Jul 22 13:47:05 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 11 December 2007.