



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint®2006 = 19.2

IBM System x3650 (Intel Xeon E5405)

SPECint_base2006 = 16.6

CPU2006 license: 11

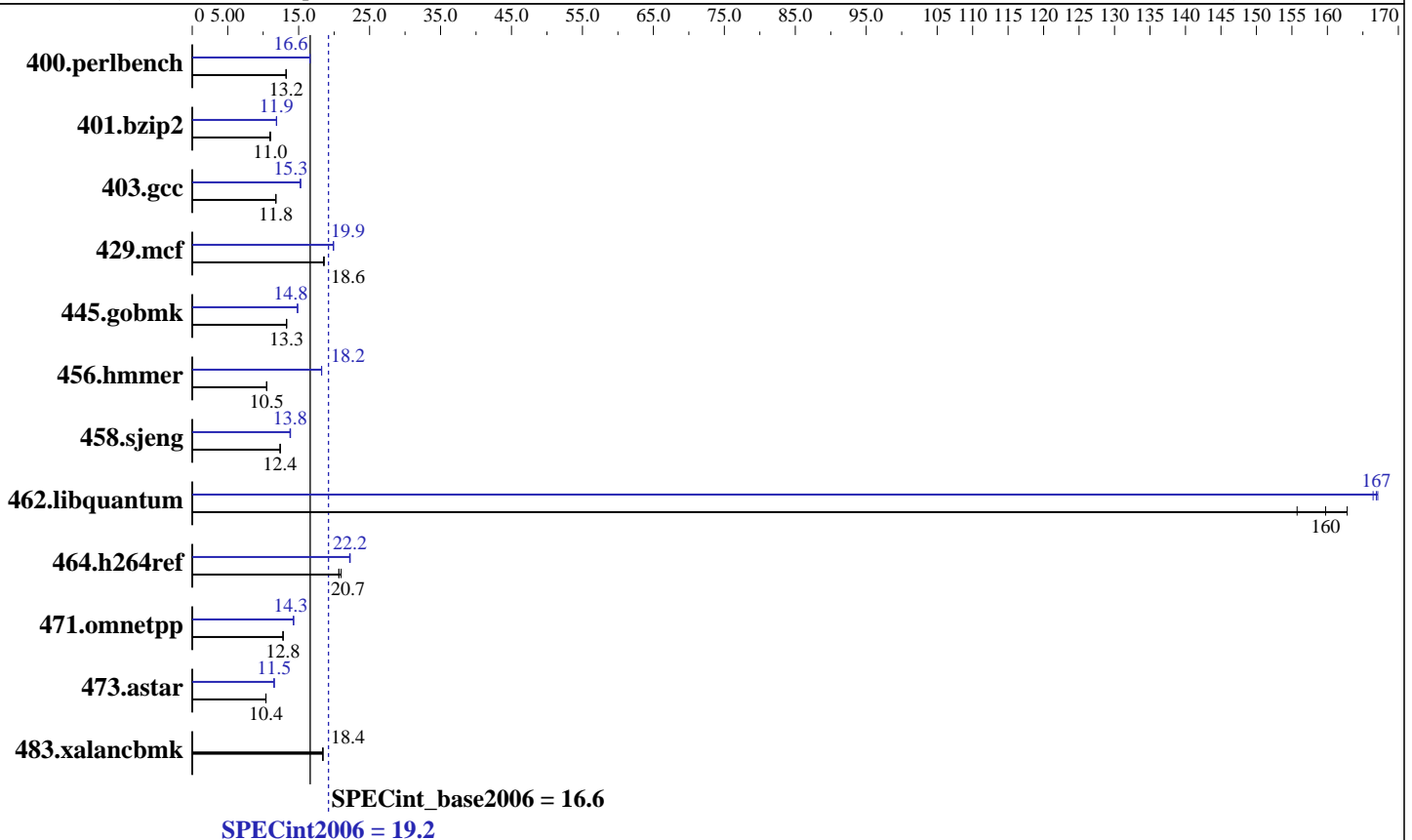
Test date: Dec-2007

Test sponsor: IBM Corporation

Hardware Availability: Jan-2008

Tested by: IBM Corporation

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon E5405
 CPU Characteristics: 1333MHz system bus
 CPU MHz: 1995
 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: SuSE Linux Enterprise Server 10 (x86_64), kernel 2.6.16.21-0.8-smp
 Compiler: Intel C++ Compiler 10.1 for Linux Build 20070913 Package ID: l_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 = 19.2

IBM System x3650 (Intel Xeon E5405)

SPECint_base2006 = 16.6

CPU2006 license: 11

Test date: Dec-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	739	13.2	<u>739</u>	<u>13.2</u>	737	13.3	589	16.6	<u>589</u>	<u>16.6</u>	588	16.6
401.bzip2	875	11.0	<u>877</u>	<u>11.0</u>	883	10.9	<u>812</u>	<u>11.9</u>	811	11.9	813	11.9
403.gcc	684	11.8	<u>682</u>	<u>11.8</u>	682	11.8	<u>528</u>	<u>15.3</u>	528	15.2	527	15.3
429.mcf	492	18.5	490	18.6	<u>491</u>	<u>18.6</u>	458	19.9	<u>458</u>	<u>19.9</u>	458	19.9
445.gobmk	<u>789</u>	<u>13.3</u>	789	13.3	789	13.3	707	14.8	<u>707</u>	<u>14.8</u>	707	14.8
456.hmmmer	889	10.5	889	10.5	<u>889</u>	<u>10.5</u>	512	18.2	<u>512</u>	<u>18.2</u>	511	18.2
458.sjeng	<u>976</u>	<u>12.4</u>	976	12.4	976	12.4	877	13.8	873	13.9	<u>876</u>	<u>13.8</u>
462.libquantum	133	156	<u>130</u>	<u>160</u>	127	163	124	166	124	167	<u>124</u>	<u>167</u>
464.h264ref	<u>1070</u>	<u>20.7</u>	1055	21.0	1071	20.7	998	22.2	994	22.3	<u>996</u>	<u>22.2</u>
471.omnetpp	<u>488</u>	<u>12.8</u>	488	12.8	489	12.8	438	14.3	437	14.3	<u>438</u>	<u>14.3</u>
473.astar	675	10.4	677	10.4	<u>675</u>	<u>10.4</u>	610	11.5	<u>608</u>	<u>11.5</u>	607	11.6
483.xalancbmk	375	18.4	<u>375</u>	<u>18.4</u>	375	18.4	375	18.4	<u>375</u>	<u>18.4</u>	375	18.4

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 =	19.2
-----------------	---------------	------

IBM System x3650 (Intel Xeon E5405)	SPECint_base2006 =	16.6
-------------------------------------	--------------------	------

CPU2006 license: 11	Test date:	Dec-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 = 19.2

IBM System x3650 (Intel Xeon E5405)

SPECint_base2006 = 16.6

CPU2006 license: 11

Test date: Dec-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.hmmr: -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 = 19.2

IBM System x3650 (Intel Xeon E5405)

SPECint_base2006 = 16.6

CPU2006 license: 11

Test date: Dec-2007

Test sponsor: IBM Corporation

Hardware Availability: Jan-2008

Tested by: IBM Corporation

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 15:06:49 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 26 December 2007.