



SPEC® CINT2006 Result

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IBM Corporation

SPECint®2006 = 16.9

IBM BladeCenter HS21 (Intel Xeon E5345)

SPECint_base2006 = 15.3

CPU2006 license: 11

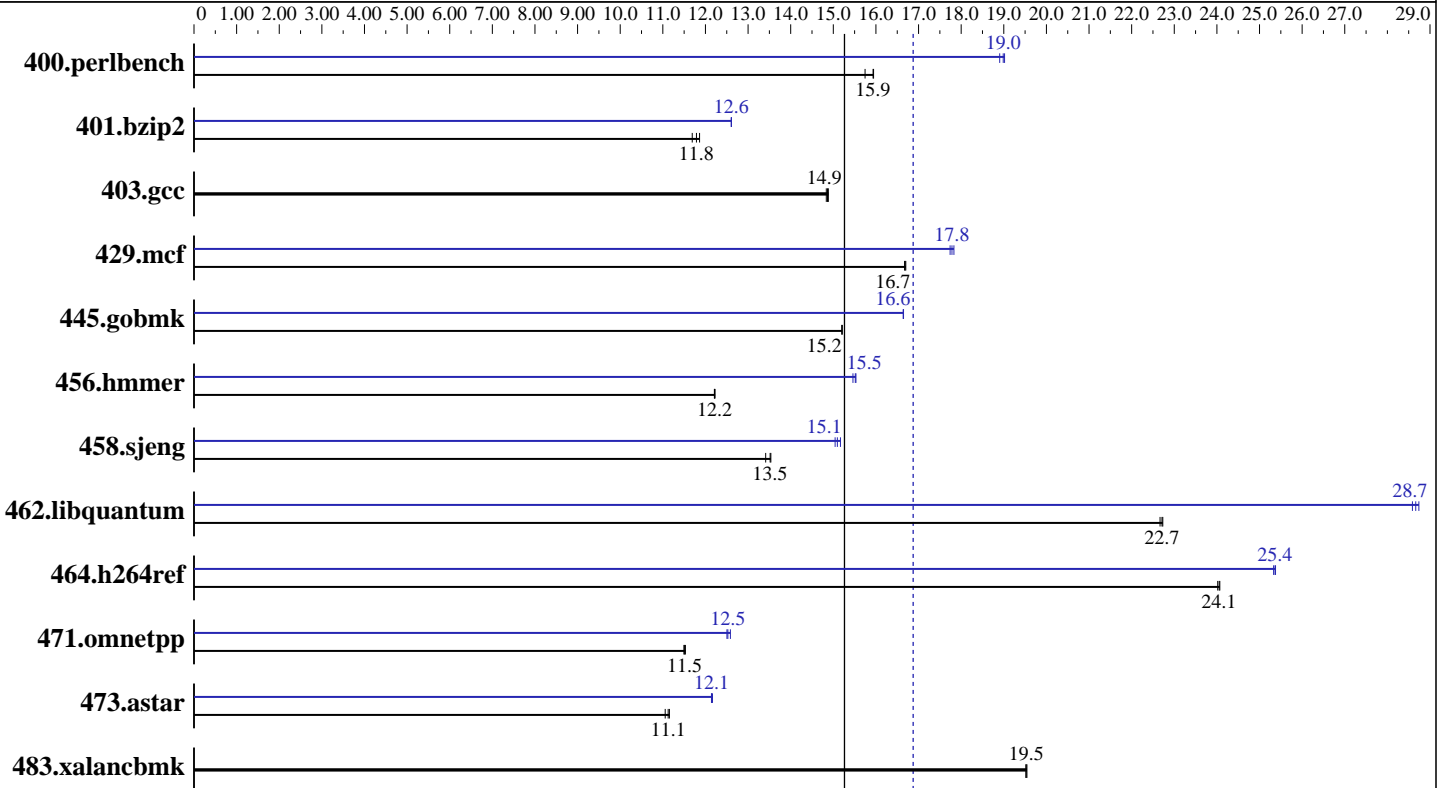
Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Jul-2007

Hardware Availability: Apr-2007

Software Availability: Jul-2007



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Hardware

CPU Name: Intel Xeon E5345
 CPU Characteristics: 1333MHz system bus
 CPU MHz: 2333
 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: 8 MB I+D on chip per chip, 4 MB shared / 2 cores
 L3 Cache: None
 Other Cache: None
 Memory: 16 GB (8 x 2GB DDR2-5300F ECC)
 Disk Subsystem: 1 x 36 GB SAS, 10000 RPM
 Other Hardware: Memory and I/O Expansion Unit (P/N 42C1600)

Software

Operating System: SLES 10 (x86_64), 2.6.16.21-0.8-smp
 Compiler: Intel C++ Compiler for Linux version 10.0
 Build 20070426 Package ID: 1_cc_p_10.0.023
 Auto Parallel: No
 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



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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<u>613</u>	<u>15.9</u>	621	15.7	613	15.9	<u>515</u>	<u>19.0</u>	514	19.0	517	18.9
401.bzip2	825	11.7	814	11.9	<u>819</u>	<u>11.8</u>	765	12.6	765	12.6	<u>765</u>	<u>12.6</u>
403.gcc	<u>542</u>	<u>14.9</u>	543	14.8	541	14.9	<u>542</u>	<u>14.9</u>	543	14.8	541	14.9
429.mcf	547	16.7	<u>547</u>	<u>16.7</u>	546	16.7	514	17.7	<u>513</u>	<u>17.8</u>	512	17.8
445.gobmk	690	15.2	690	15.2	<u>690</u>	<u>15.2</u>	630	16.6	630	16.6	<u>630</u>	<u>16.6</u>
456.hammer	764	12.2	<u>764</u>	<u>12.2</u>	763	12.2	603	15.5	<u>601</u>	<u>15.5</u>	601	15.5
458.sjeng	894	13.5	<u>895</u>	<u>13.5</u>	902	13.4	798	15.2	<u>802</u>	<u>15.1</u>	804	15.0
462.libquantum	914	22.7	912	22.7	<u>912</u>	<u>22.7</u>	725	28.6	<u>723</u>	<u>28.7</u>	721	28.7
464.h264ref	<u>920</u>	<u>24.1</u>	921	24.0	919	24.1	<u>873</u>	<u>25.4</u>	874	25.3	872	25.4
471.omnetpp	542	11.5	<u>543</u>	<u>11.5</u>	544	11.5	497	12.6	<u>499</u>	<u>12.5</u>	500	12.5
473.astar	<u>631</u>	<u>11.1</u>	629	11.2	635	11.1	<u>578</u>	<u>12.1</u>	578	12.1	577	12.2
483.xalancbmk	353	19.5	354	19.5	<u>353</u>	<u>19.5</u>	353	19.5	354	19.5	<u>353</u>	<u>19.5</u>

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

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

Base Optimization Flags

C benchmarks:
-fast

C++ benchmarks:
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/spec/cpu2006.1.0/lib -lsmartheap



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Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc

401.bzip2: /opt/intel/cce/10.0.023/bin/icc
-L/opt/intel/cce/10.0.023/lib
-I/opt/intel/cce/10.0.023/include

456.hmmer: /opt/intel/cce/10.0.023/bin/icc
-L/opt/intel/cce/10.0.023/lib
-I/opt/intel/cce/10.0.023/include

C++ benchmarks:

icpc

Peak Portability Flags

400.perlbenc: -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:

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

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

403.gcc: basepeak = yes

429.mcf: -fast -prefetch

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

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Peak Optimization Flags (Continued)

456.hmmer: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2
-ansi-alias

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

462.libquantum: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4 -Ob0
-prefetch -opt-streaming-stores always

464.h264ref: Same as 456.hmmer

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo
-no-prec_div -ansi-alias -Wl,-z,muldefs
-L/spec/cpu2006.1.0/lib -lsmartheap

473.astar: Same as 471.omnetpp

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

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.20090714.44.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.20090714.44.xml>

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For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 12:33:19 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 23 August 2007.