SPEC® CINT2006 Result

IBM Corporation

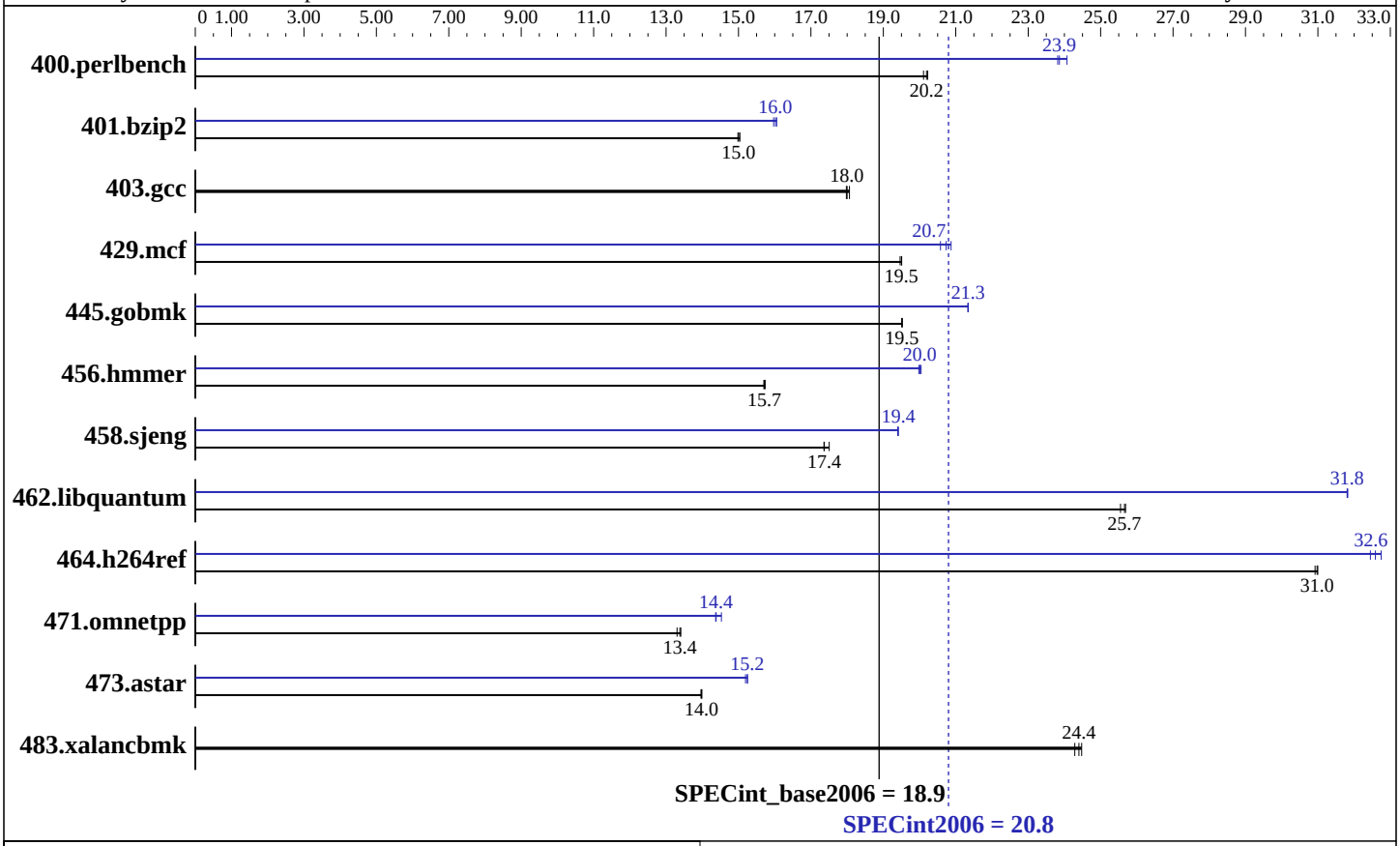
IBM System x3650 (Intel Xeon 5160)

SPECint®2006 = 20.8

SPECint_base2006 = 18.9

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

Test date: Jul-2007
Hardware Availability: Jul-2006
Software Availability: Jul-2007



Hardware

CPU Name:	Intel Xeon 5160
CPU Characteristics:	1333MHz system bus
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip
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:	SLES 10 (x86_64), 2.6.16.21-0.8-smp
Compiler:	Intel C++ Compiler for Linux version 10.0 Build 20070426 Package ID: l_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	**484**	**20.2**	483	20.2	486	20.1	406	24.1	410	23.8	**409**	**23.9**
401.bzip2	642	15.0	**643**	**15.0**	644	15.0	604	16.0	**602**	**16.0**	601	16.1
403.gcc	**447**	**18.0**	448	18.0	446	18.1	**447**	**18.0**	448	18.0	446	18.1
429.mcf	**468**	**19.5**	469	19.5	468	19.5	437	20.9	443	20.6	**440**	**20.7**
445.gobmk	538	19.5	**538**	**19.5**	537	19.5	492	21.3	491	21.3	**492**	**21.3**
456.hmmer	594	15.7	593	15.7	**594**	**15.7**	466	20.0	467	20.0	**466**	**20.0**
458.sjeng	691	17.5	697	17.4	**697**	**17.4**	624	19.4	**623**	**19.4**	623	19.4
462.libquantum	811	25.5	807	25.7	**807**	**25.7**	**651**	**31.8**	651	31.8	651	31.8
464.h264ref	714	31.0	**714**	**31.0**	716	30.9	682	32.4	676	32.7	**679**	**32.6**
471.omnetpp	470	13.3	**467**	**13.4**	466	13.4	430	14.5	**435**	**14.4**	435	14.4
473.astar	**502**	**14.0**	503	14.0	502	14.0	**461**	**15.2**	460	15.3	462	15.2
483.xalancbmk	**283**	**24.4**	284	24.3	282	24.5	**283**	**24.4**	284	24.3	282	24.5

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`

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.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:

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`

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`

Continued on next page

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`

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 12:33:47 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 23 August 2007.