SPEC® CINT2006 Result

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IBM Corporation

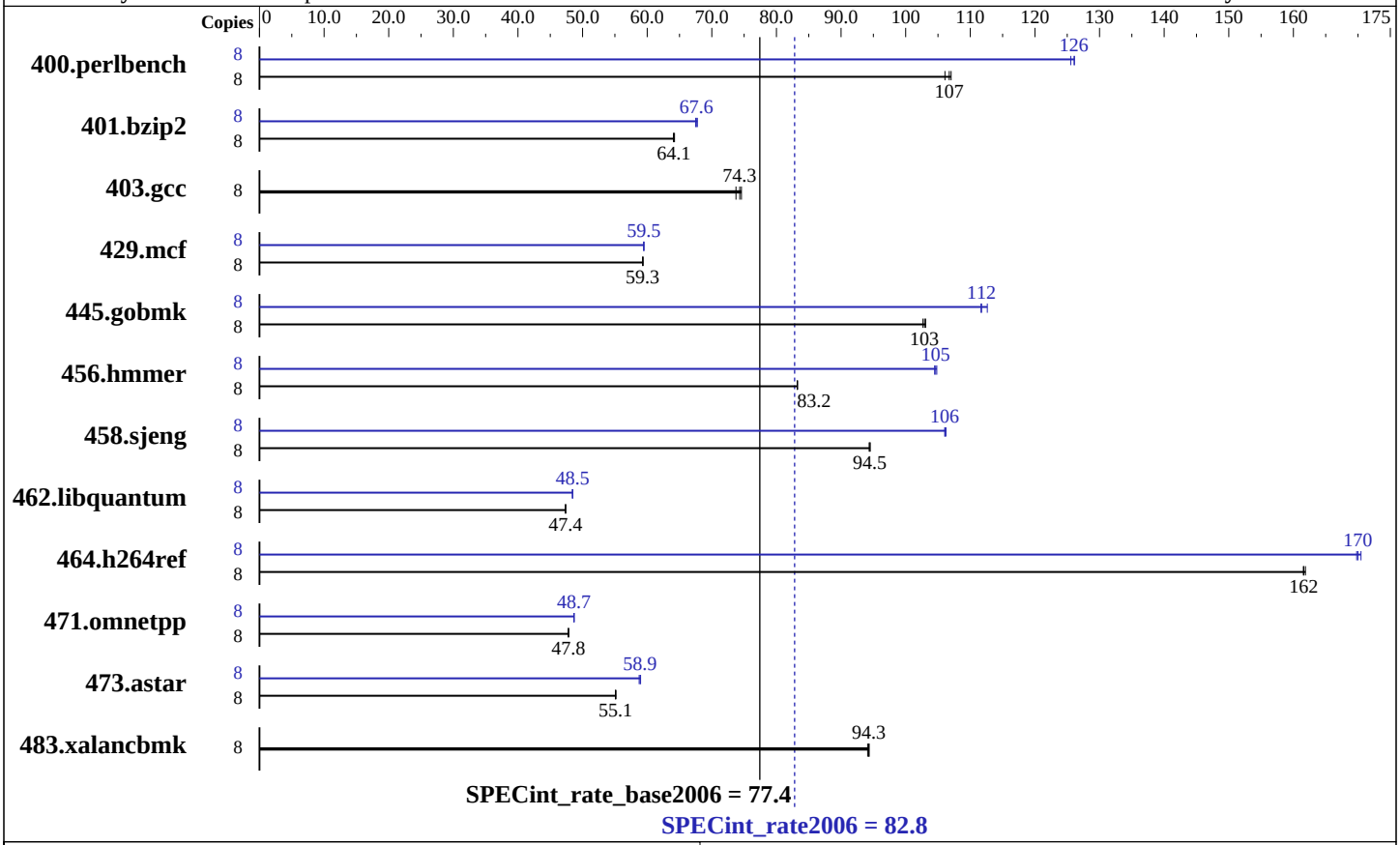
IBM BladeCenter HS21 XM (Intel Xeon E5335)

SPECint®_rate2006 = 82.8

SPECint_rate_base2006 = 77.4

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

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



Hardware

CPU Name:	Intel Xeon E5335
CPU Characteristics:	1333MHz system bus
CPU MHz:	2000
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:	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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	**732**	**107**	730	107	737	106	8	623	126	**620**	**126**	620	126
401.bzip2	8	1202	64.2	1205	64.1	**1204**	**64.1**	8	1139	67.8	1144	67.5	**1142**	**67.6**
403.gcc	8	863	74.6	**866**	**74.3**	873	73.7	8	863	74.6	**866**	**74.3**	873	73.7
429.mcf	8	**1230**	**59.3**	1230	59.3	1229	59.4	8	1227	59.5	**1227**	**59.5**	1226	59.5
445.gobmk	8	817	103	814	103	**815**	**103**	8	745	113	752	112	**751**	**112**
456.hmmer	8	**897**	**83.2**	896	83.3	897	83.2	8	714	104	712	105	**713**	**105**
458.sjeng	8	1026	94.3	1024	94.5	**1025**	**94.5**	8	**913**	**106**	913	106	911	106
462.libquantum	8	3500	47.4	**3499**	**47.4**	3499	47.4	8	3422	48.4	**3421**	**48.5**	3421	48.5
464.h264ref	8	**1095**	**162**	1096	162	1094	162	8	1039	170	1043	170	**1041**	**170**
471.omnetpp	8	1046	47.8	**1046**	**47.8**	1045	47.9	8	1027	48.7	**1027**	**48.7**	1027	48.7
473.astar	8	1018	55.2	**1019**	**55.1**	1020	55.1	8	**954**	**58.9**	952	59.0	956	58.8
483.xalancbmk	8	585	94.3	**585**	**94.3**	587	94.1	8	585	94.3	**585**	**94.3**	587	94.1

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

General Notes

```
taskset utility used to bind CPU(s) to processes
```

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`

Continued on next page

Base Optimization Flags (Continued)

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`

Continued on next page

Peak Optimization Flags (Continued)

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

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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Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 12:33:11 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 23 August 2007.