SPEC® CINT2006 Result

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IBM Corporation

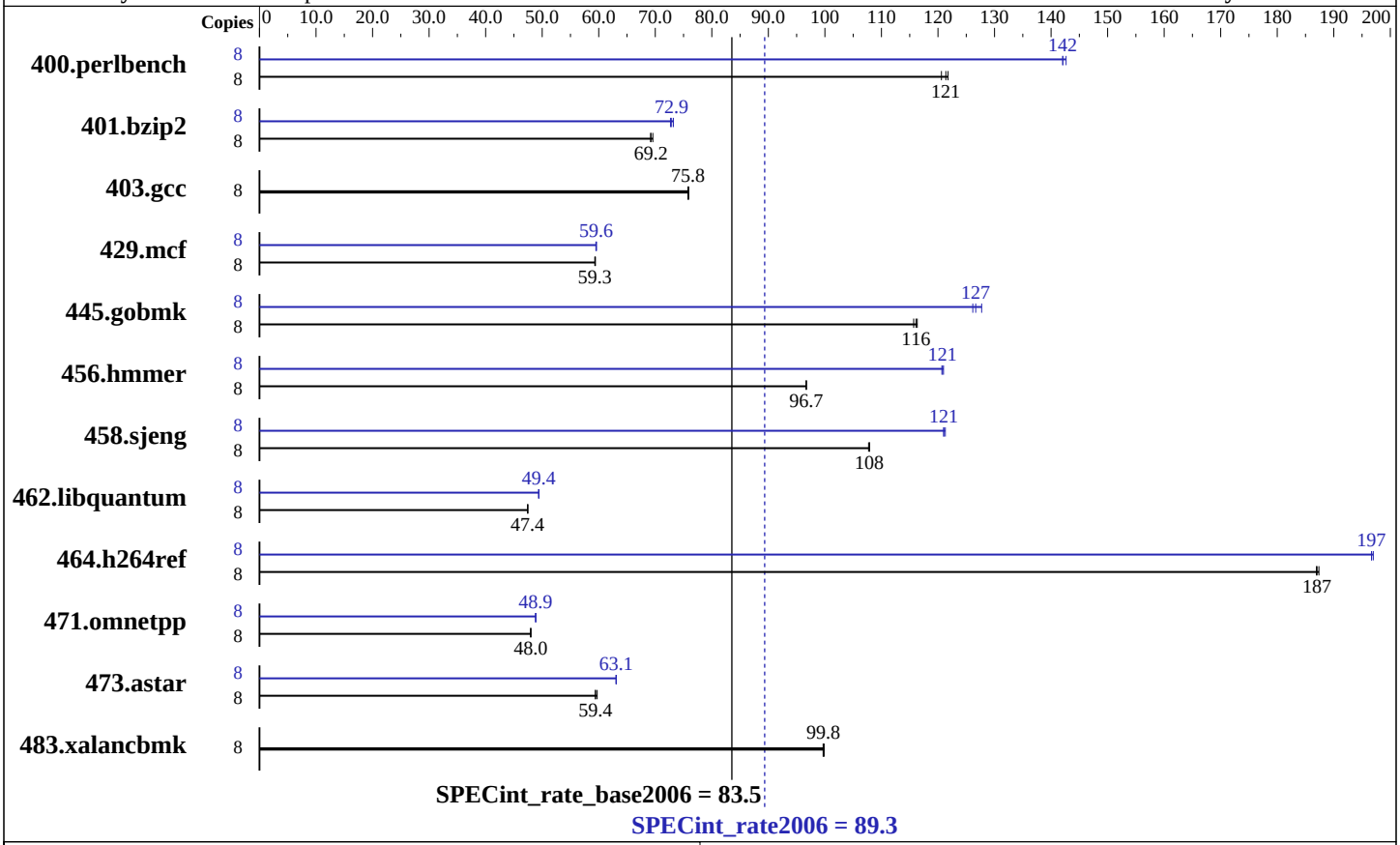
IBM BladeCenter HS21 (Intel Xeon E5345)

SPECint®_rate2006 = 89.3

SPECint_rate_base2006 = 83.5

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

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



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: 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	648	121	**644**	**121**	642	122	8	550	142	**550**	**142**	548	143
401.bzip2	8	1110	69.6	1116	69.2	**1115**	**69.2**	8	1054	73.2	**1059**	**72.9**	1062	72.7
403.gcc	8	848	75.9	**849**	**75.8**	850	75.8	8	848	75.9	**849**	**75.8**	850	75.8
429.mcf	8	1230	59.3	1228	59.4	**1229**	**59.3**	8	1224	59.6	1226	59.5	**1225**	**59.6**
445.gobmk	8	**723**	**116**	721	116	725	116	8	657	128	**662**	**127**	665	126
456.hmmer	8	772	96.7	772	96.7	**772**	**96.7**	8	618	121	**618**	**121**	617	121
458.sjeng	8	897	108	**897**	**108**	899	108	8	798	121	**800**	**121**	800	121
462.libquantum	8	3493	47.5	3494	47.4	**3494**	**47.4**	8	3356	49.4	3355	49.4	**3356**	**49.4**
464.h264ref	8	**947**	**187**	947	187	945	187	8	899	197	**900**	**197**	900	197
471.omnetpp	8	1043	48.0	**1042**	**48.0**	1042	48.0	8	1024	48.8	1023	48.9	**1023**	**48.9**
473.astar	8	940	59.7	946	59.4	**945**	**59.4**	8	890	63.1	**890**	**63.1**	891	63.1
483.xalancbmk	8	554	99.7	**553**	**99.8**	553	99.9	8	554	99.7	**553**	**99.8**	553	99.9

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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