SPEC® CINT2006 Result

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IBM Corporation

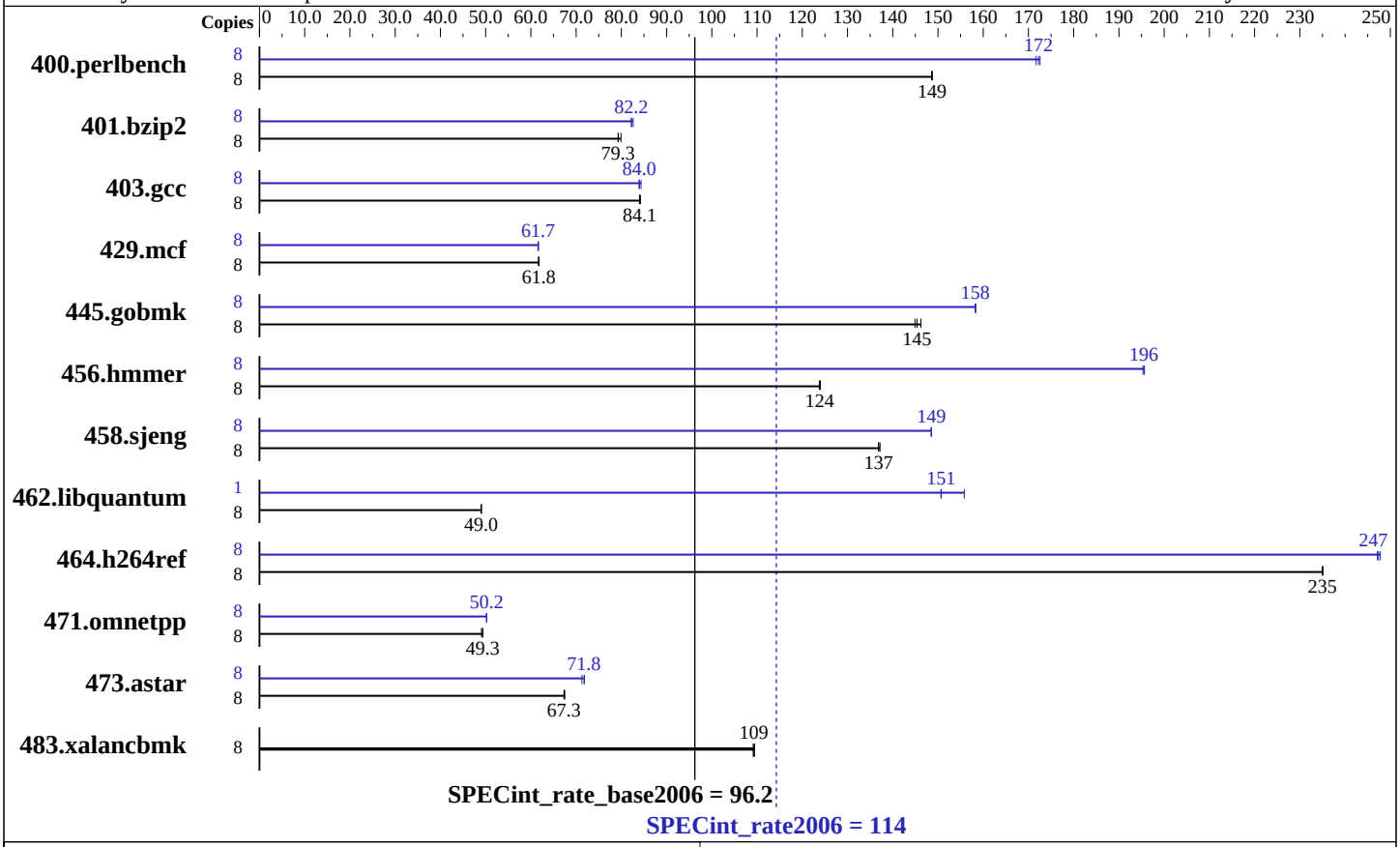
IBM BladeCenter HS21 (Intel Xeon X5365)

SPECint®_rate2006 = 114

SPECint_rate_base2006 = 96.2

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

Test date: Sep-2007
Hardware Availability: Sep-2007
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Xeon X5365
CPU Characteristics:	1333MHz system bus
CPU MHz:	3000
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 2 GB 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 10.1 Build 20070725
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

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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	**526**	**149**	526	149	526	149	8	455	172	**454**	**172**	453	173
401.bzip2	8	966	79.9	**973**	**79.3**	974	79.3	8	**939**	**82.2**	939	82.2	934	82.6
403.gcc	8	**766**	**84.1**	765	84.2	767	84.0	8	763	84.4	**767**	**84.0**	767	83.9
429.mcf	8	**1181**	**61.8**	1180	61.8	1183	61.7	8	1185	61.6	1183	61.7	**1183**	**61.7**
445.gobmk	8	579	145	574	146	**577**	**145**	8	**530**	**158**	530	158	530	158
456.hmmer	8	602	124	603	124	**603**	**124**	8	**382**	**196**	382	196	382	195
458.sjeng	8	**707**	**137**	706	137	707	137	8	**652**	**149**	652	148	652	149
462.libquantum	8	**3381**	**49.0**	3381	49.0	3380	49.0	1	138	151	**137**	**151**	133	156
464.h264ref	8	753	235	753	235	**753**	**235**	8	**716**	**247**	714	248	716	247
471.omnetpp	8	1019	49.1	**1013**	**49.3**	1013	49.4	8	996	50.2	995	50.2	**996**	**50.2**
473.astar	8	834	67.3	832	67.5	**834**	**67.3**	8	788	71.3	**783**	**71.8**	782	71.8
483.xalancbmk	8	**505**	**109**	506	109	504	109	8	**505**	**109**	506	109	504	109

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

General Notes

```
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to physical,0
KMP_STACKSIZE set to 64M
```

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 -inline-calloc -opt-malloc-options=3`

Continued on next page

Base Optimization Flags (Continued)

C++ benchmarks:
`-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs`
`-L/home/cmplr/usr3/alrahate/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: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/bin/icc`
`-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib`
`-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/include`

456.hmmer: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/bin/icc`
`-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib`
`-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/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 -prefetch

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.hmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive

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/home/cmplr/usr3/alrahate/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/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

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.20090714.02.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.20090714.02.xml

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