SPEC® CINT2006 Result

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Intel Corporation

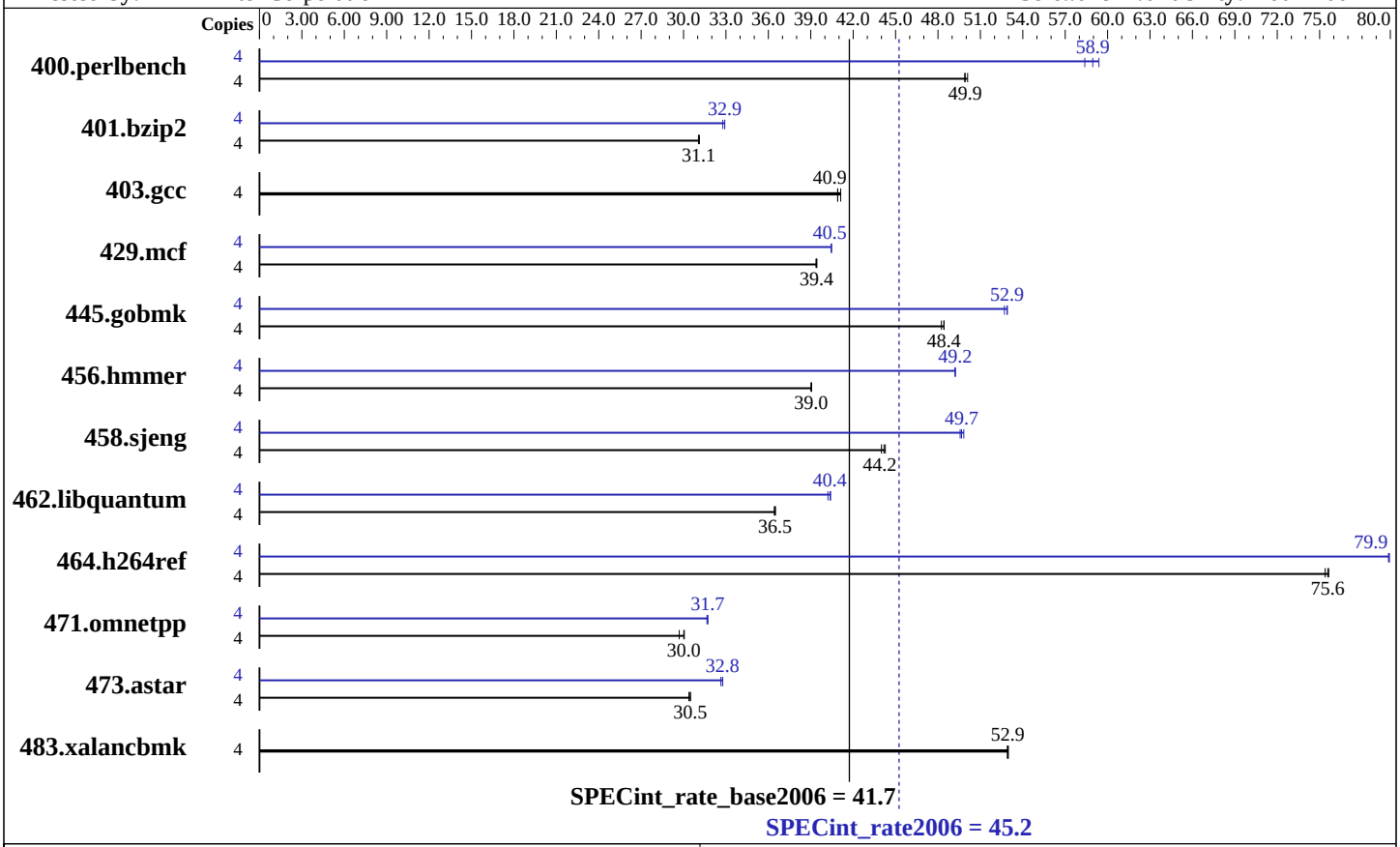
Supermicro X7DB8+ (Intel Xeon processor 5120, 1.86 GHz)

SPECint®_rate2006 = 45.2

SPECint_rate_base2006 = 41.7

CPU2006 license: 13
Test sponsor: Intel Corporation
Tested by: Intel Corporation

Test date: May-2007
Hardware Availability: Nov-2006
Software Availability: Jun-2007



Hardware

CPU Name:	Intel Xeon 5120
CPU Characteristics:	Dual Core, 1.86 GHz
CPU MHz:	1866
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:	8 GB (8 * 1GB Samsung DDR2 5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem:	Seagate, SCSI, 73GB, 10Krpm, 1 disk only
Other Hardware:	None

Software

Operating System:	64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp for x86_64
Compiler:	Intel C++ Compiler for Linux32 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:	SmartHeap library V8.1 Binutils 2.17.50.0.15

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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	4	780	50.1	783	49.9	**783**	**49.9**	4	669	58.4	**663**	**58.9**	658	59.4
401.bzip2	4	**1242**	**31.1**	1243	31.1	1240	31.1	4	1178	32.8	1173	32.9	**1173**	**32.9**
403.gcc	4	787	40.9	**787**	**40.9**	783	41.1	4	787	40.9	**787**	**40.9**	783	41.1
429.mcf	4	925	39.4	**925**	**39.4**	927	39.4	4	902	40.5	902	40.5	**902**	**40.5**
445.gobmk	4	866	48.4	870	48.2	**867**	**48.4**	4	796	52.7	793	52.9	**793**	**52.9**
456.hmmer	4	**956**	**39.0**	957	39.0	955	39.1	4	**758**	**49.2**	758	49.2	758	49.2
458.sjeng	4	1100	44.0	**1096**	**44.2**	1093	44.3	4	**975**	**49.7**	976	49.6	971	49.8
462.libquantum	4	2270	36.5	**2273**	**36.5**	2276	36.4	4	2061	40.2	**2053**	**40.4**	2051	40.4
464.h264ref	4	1174	75.4	1170	75.6	**1171**	**75.6**	4	1108	79.9	1108	79.9	**1108**	**79.9**
471.omnetpp	4	832	30.1	842	29.7	**833**	**30.0**	4	788	31.7	790	31.7	**788**	**31.7**
473.astar	4	**921**	**30.5**	921	30.5	924	30.4	4	**857**	**32.8**	857	32.8	860	32.6
483.xalancbmk	4	**521**	**52.9**	522	52.9	521	53.0	4	**521**	**52.9**	522	52.9	521	53.0

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

General Notes

```
Bios settings:
Hardware Prefetcher:      Enabled
Adjacent Sector Prefetch: Disabled
ulimit -s unlimited used to set stack size to unlimited
taskset command used to assign copies to cores
All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer,
for peak, are compiled in 64-bit mode
```

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:

Continued on next page

Peak Optimization Flags (Continued)

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`

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.20090715.00.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.20090715.00.xml`

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