SPEC® CINT2006 Result

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Dell Inc.

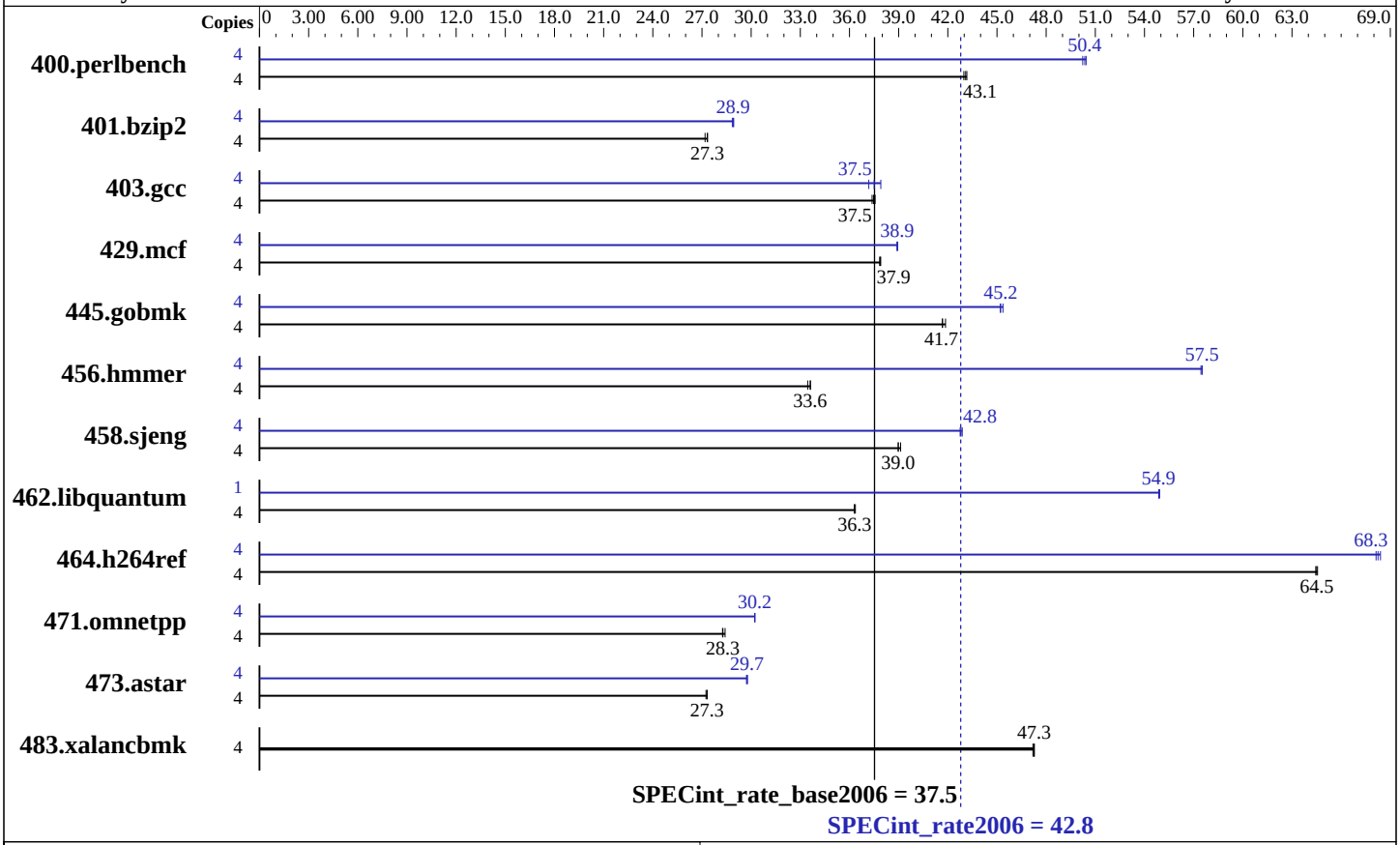
PowerEdge 1950 (Intel Xeon 5110, 1.60 GHz)

SPECint®_rate2006 = 42.8

SPECint_rate_base2006 = 37.5

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Oct-2007
Hardware Availability: Dec-2006
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Xeon 5110
CPU Characteristics:	1066 MHz system bus
CPU MHz:	1666
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 (8x2 GB 667 MHz ECC CL5 FB-DIMM)
Disk Subsystem:	1 x 73 GB SAS 15k RPM
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
Compiler:	Intel C++ Compiler for Linux32 and Linux64 version 10.1 Build 20070725
Auto Parallel:	Yes
File System:	ReiserFS
System State:	Default
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	SmartHeap library V8.1

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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	4	905	43.2	**907**	**43.1**	909	43.0	4	**776**	**50.4**	775	50.4	778	50.2
401.bzip2	4	1412	27.3	**1412**	**27.3**	1420	27.2	4	1338	28.8	1334	28.9	**1335**	**28.9**
403.gcc	4	**859**	**37.5**	861	37.4	857	37.6	4	849	37.9	866	37.2	**859**	**37.5**
429.mcf	4	**963**	**37.9**	963	37.9	964	37.8	4	**937**	**38.9**	937	38.9	938	38.9
445.gobmk	4	**1007**	**41.7**	1002	41.9	1007	41.7	4	**928**	**45.2**	928	45.2	925	45.4
456.hmmer	4	1116	33.5	**1111**	**33.6**	1110	33.6	4	650	57.4	**649**	**57.5**	649	57.5
458.sjeng	4	**1242**	**39.0**	1242	39.0	1237	39.1	4	1132	42.8	**1131**	**42.8**	1129	42.9
462.libquantum	4	2279	36.4	**2282**	**36.3**	2284	36.3	1	**378**	**54.9**	377	54.9	378	54.9
464.h264ref	4	1373	64.4	**1372**	**64.5**	1371	64.6	4	1299	68.1	**1297**	**68.3**	1294	68.4
471.omnetpp	4	885	28.3	880	28.4	**884**	**28.3**	4	827	30.2	827	30.2	**827**	**30.2**
473.astar	4	1031	27.2	1028	27.3	**1028**	**27.3**	4	945	29.7	**944**	**29.7**	943	29.8
483.xalancbmk	4	**584**	**47.3**	584	47.3	585	47.2	4	**584**	**47.3**	584	47.3	585	47.2

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

Compiler Invocation Notes

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

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
'/usr/bin/taskset' used to bind processes to CPUs
```

Platform Notes

```
BIOS Settings:
Adjacent Cache Line Prefetch = Disabled (default Enabled)
```

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`

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`

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Peak Portability Flags (Continued)

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 -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.20090713.02.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.20090713.02.xml`

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