SPEC® CINT2006 Result

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Dell Inc.

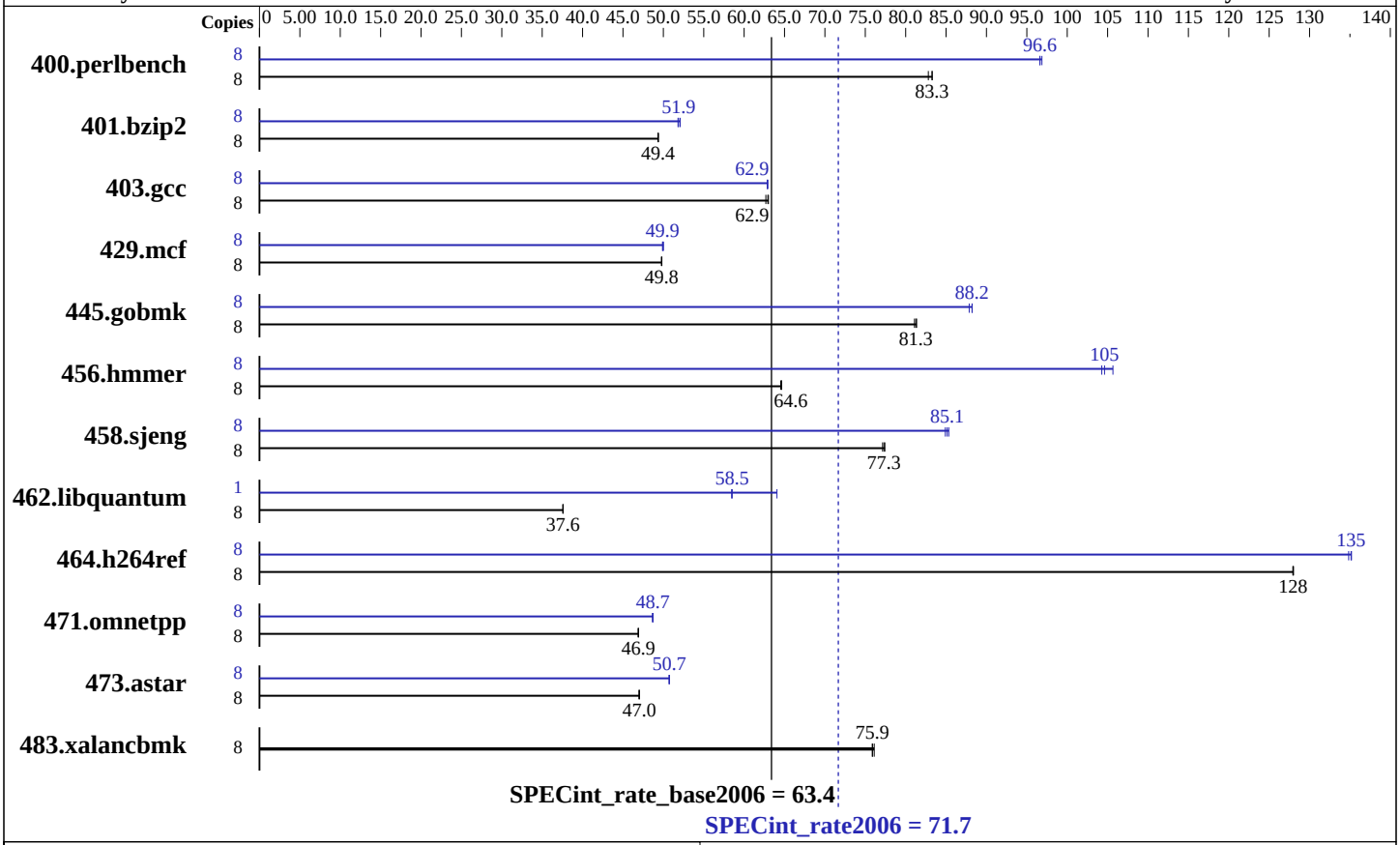
PowerEdge 1950 (Intel Xeon E5310, 1.60 GHz)

SPECint®_rate2006 = 71.7

SPECint_rate_base2006 = 63.4

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 E5310
CPU Characteristics:	1066 MHz system bus
CPU MHz:	1666
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:	8 GB (8x1 GB 667 Mhz ECC CL5 FB-DIMM)
Disk Subsystem:	1 x 73 GB SAS 15k RPM
Other Hardware:	None

Software

Operating System:	64-Bit SUSE LINUX Enterprise Server 10 SP1
Compiler:	Intel C++ Compiler for Linux32 and Linux64 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:	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	8	938	83.3	**939**	**83.3**	944	82.8	8	809	96.6	807	96.9	**809**	**96.6**
401.bzip2	8	1563	49.4	**1564**	**49.4**	1565	49.3	8	1482	52.1	**1488**	**51.9**	1490	51.8
403.gcc	8	1022	63.0	**1023**	**62.9**	1027	62.7	8	**1024**	**62.9**	1025	62.9	1023	62.9
429.mcf	8	**1466**	**49.8**	1466	49.8	1465	49.8	8	1459	50.0	1462	49.9	**1461**	**49.9**
445.gobmk	8	1032	81.4	**1033**	**81.3**	1035	81.1	8	**951**	**88.2**	951	88.2	955	87.9
456.hmmer	8	1157	64.5	1155	64.6	**1155**	**64.6**	8	**713**	**105**	706	106	716	104
458.sjeng	8	1255	77.1	1250	77.4	**1252**	**77.3**	8	1140	84.9	**1137**	**85.1**	1134	85.3
462.libquantum	8	**4411**	**37.6**	4411	37.6	4412	37.6	1	**354**	**58.5**	355	58.4	323	64.1
464.h264ref	8	**1384**	**128**	1384	128	1383	128	8	**1310**	**135**	1310	135	1313	135
471.omnetpp	8	1066	46.9	1067	46.9	**1066**	**46.9**	8	1028	48.7	**1027**	**48.7**	1027	48.7
473.astar	8	1194	47.0	1195	47.0	**1194**	**47.0**	8	**1107**	**50.7**	1107	50.7	1107	50.7
483.xalancbmk	8	725	76.1	728	75.9	**727**	**75.9**	8	725	76.1	728	75.9	**727**	**75.9**

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)
Hardware Prefetcher = 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

Continued on next page

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.20090714.22.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.20090714.22.xml`

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