SPEC® CINT2006 Result

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Dell Inc.

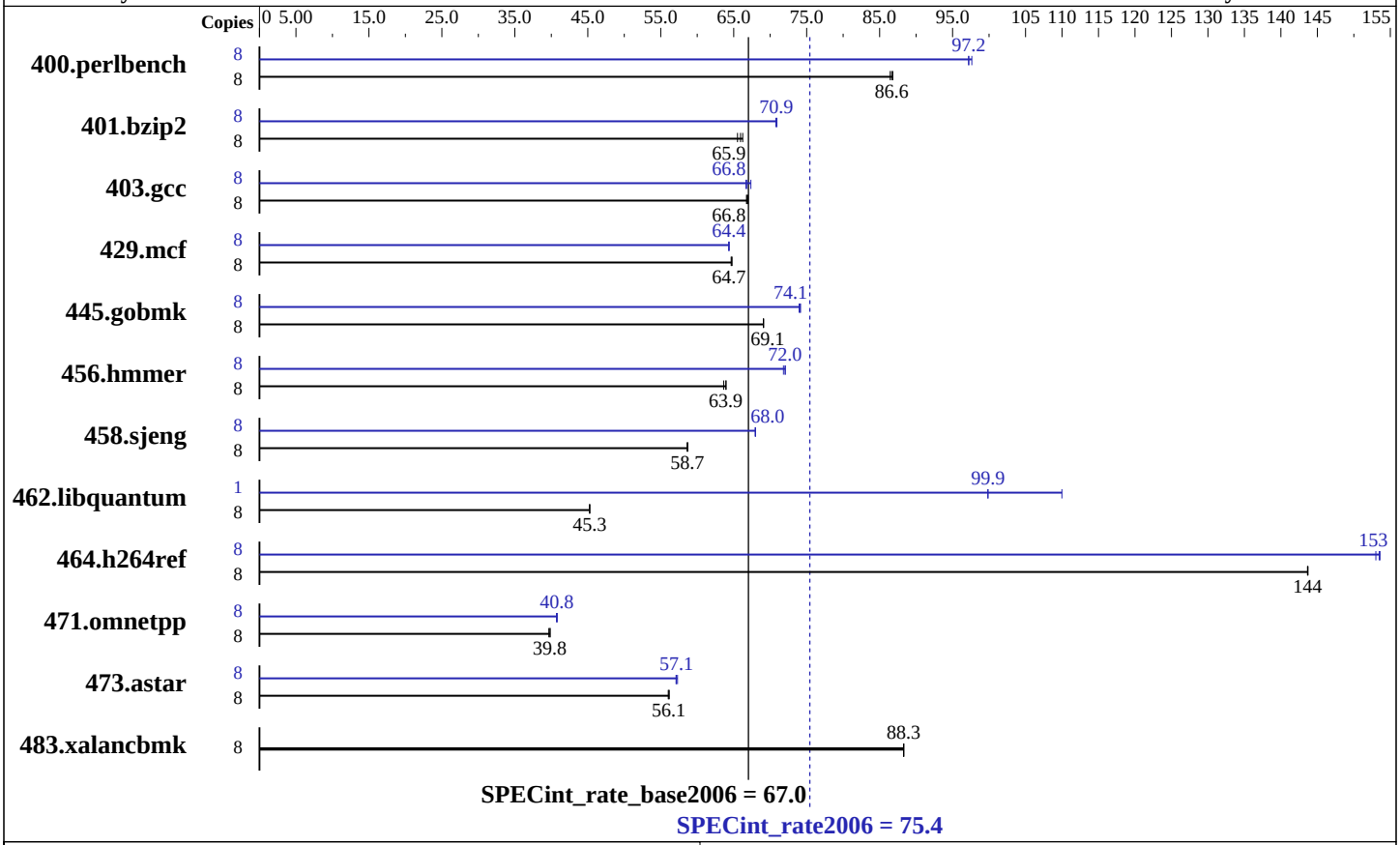
PowerEdge 6850 (Intel Xeon 7130M, 3.20 GHz)

SPECint®_rate2006 = 75.4

SPECint_rate_base2006 = 67.0

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

Test date: Sep-2007
Hardware Availability: Aug-2006
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Xeon 7130M
CPU Characteristics:	800 MHz system bus
CPU MHz:	3200
FPU:	Integrated
CPU(s) enabled:	8 cores, 4 chips, 2 cores/chip
CPU(s) orderable:	1,2,4 chips
Primary Cache:	12 K micro-ops I + 16 KB D on chip per core
Secondary Cache:	1 MB I+D on chip per core
L3 Cache:	8 MB I+D on chip per chip
Other Cache:	None
Memory:	16 GB (16 x 1 GB ECC 400 MHz DDR2 SDRAM)
Disk Subsystem:	2 x 36 GB SCSI 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	904	86.5	**902**	**86.6**	900	86.8	8	**804**	**97.2**	804	97.2	801	97.6
401.bzip2	8	**1171**	**65.9**	1166	66.2	1178	65.5	8	**1089**	**70.9**	1091	70.8	1088	70.9
403.gcc	8	**964**	**66.8**	962	66.9	965	66.8	8	956	67.4	966	66.7	**964**	**66.8**
429.mcf	8	**1127**	**64.7**	1129	64.6	1127	64.7	8	**1134**	**64.4**	1135	64.3	1133	64.4
445.gobmk	8	1215	69.1	**1215**	**69.1**	1215	69.1	8	**1132**	**74.1**	1135	74.0	1132	74.2
456.hmmer	8	1167	63.9	1173	63.6	**1167**	**63.9**	8	1036	72.1	**1036**	**72.0**	1039	71.8
458.sjeng	8	1651	58.6	**1650**	**58.7**	1649	58.7	8	1424	68.0	**1424**	**68.0**	1425	67.9
462.libquantum	8	3663	45.3	3663	45.3	**3663**	**45.3**	1	208	99.8	188	110	**207**	**99.9**
464.h264ref	8	**1232**	**144**	1232	144	1232	144	8	**1154**	**153**	1153	154	1157	153
471.omnetpp	8	1261	39.7	1255	39.8	**1256**	**39.8**	8	**1226**	**40.8**	1226	40.8	1228	40.7
473.astar	8	1000	56.2	**1001**	**56.1**	1002	56.0	8	980	57.3	**983**	**57.1**	984	57.1
483.xalancbmk	8	625	88.3	625	88.3	**625**	**88.3**	8	625	88.3	625	88.3	**625**	**88.3**

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:
Logical Processor = Disabled (default Enabled)
```

General Notes

```
This result was measured on the Dell PowerEdge 6800.
The PowerEdge 6800 and PowerEdge 6850 are electronically equivalent.
```

Base Compiler Invocation

C benchmarks:

```
icc
```

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Base Compiler Invocation (Continued)

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:
-xP -ipo -O3 -no-prec-div -static -inline-calloc
-opt-malloc-options=3

C++ benchmarks:
-xP -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) -xP -ipo -O3
-no-prec-div -static -ansi-alias -prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -xP -ipo -O3
-no-prec-div -static -prefetch

403.gcc: -xP -ipo -O3 -no-prec-div -static -inline-calloc
-opt-malloc-options=3

429.mcf: -xP -ipo -O3 -no-prec-div -static -prefetch

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xP -O2 -ipo
-no-prec-div -ansi-alias

456.hmmer: -xP -ipo -O3 -no-prec-div -static -unroll2 -ansi-alias
-opt-multi-version-aggressive

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xP -ipo -O3
-no-prec-div -static -unroll4

462.libquantum: -xP -ipo -O3 -no-prec-div -static -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) -xP -ipo -O3
-no-prec-div -static -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xP -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) -xP -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

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Peak Optimization Flags (Continued)

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.20090714.30.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.20090714.30.xml`

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For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 14:08:07 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 1 November 2007.