SPEC® CINT2006 Result

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Fujitsu Siemens Computers

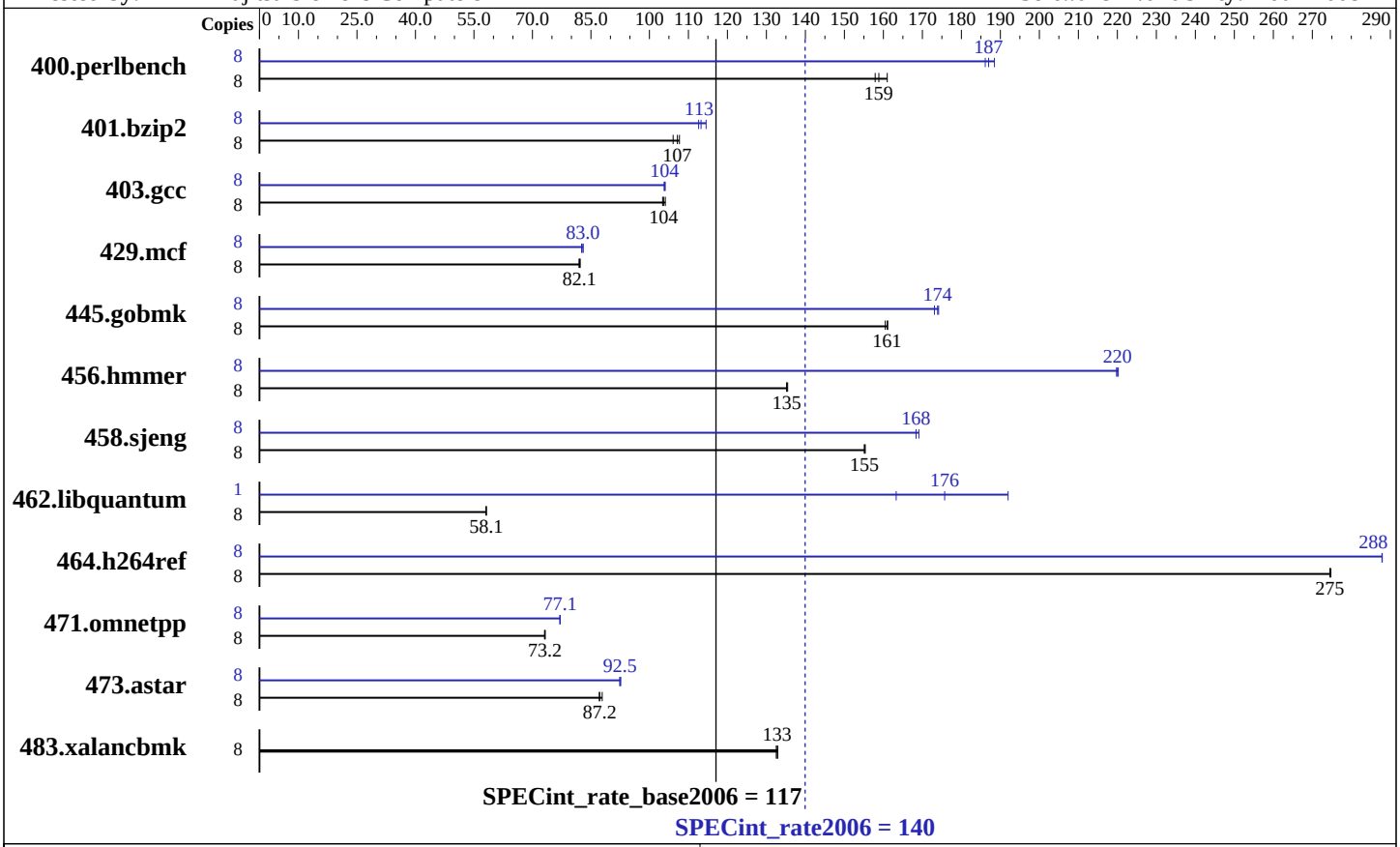
CELSIUS R650, Intel Xeon X5470 processor

SPECint®_rate2006 = 140

SPECint_rate_base2006 = 117

CPU2006 license: 22
Test sponsor: Fujitsu Siemens Computers
Tested by: Fujitsu Siemens Computers

Test date: Aug-2008
Hardware Availability: Sep-2008
Software Availability: Jun-2008



Hardware

CPU Name:	Intel Xeon X5470
CPU Characteristics:	
CPU MHz:	3333
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:	12 MB I+D on chip per chip, 6 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	8 GB (8x1 GB DDR2 5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem:	1 x SATA II, 400 GB, 7200 rpm
Other Hardware:	None

Software

Operating System:	SuSE Linux Enterprise Server 10 (x86_64) SP2, kernel 2.6.16.60-0.21-smp
Compiler:	Intel C++ Compiler for Linux32 and Linux64, Version 10.1, Build 20080602
Auto Parallel:	Yes
File System:	ext3
System State:	Multi-User, Run Level 3
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap Library, Version 8.1 binutils-2.17.50.0.5-0.1.x86_64

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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	485	161	495	158	**492**	**159**	8	415	188	**418**	**187**	420	186
401.bzip2	8	717	108	728	106	**720**	**107**	8	685	113	**682**	**113**	674	115
403.gcc	8	**621**	**104**	623	103	619	104	8	621	104	**620**	**104**	619	104
429.mcf	8	**889**	**82.1**	890	81.9	887	82.3	8	**879**	**83.0**	879	83.0	883	82.6
445.gobmk	8	523	160	521	161	**521**	**161**	8	485	173	**483**	**174**	482	174
456.hmmer	8	552	135	551	135	**552**	**135**	8	340	220	339	220	**339**	**220**
458.sjeng	8	623	155	624	155	**624**	**155**	8	572	169	**575**	**168**	575	168
462.libquantum	8	2850	58.2	**2851**	**58.1**	2852	58.1	1	**118**	**176**	127	163	108	192
464.h264ref	8	**645**	**275**	644	275	645	274	8	615	288	**615**	**288**	615	288
471.omnetpp	8	683	73.2	684	73.1	**683**	**73.2**	8	**649**	**77.1**	649	77.1	649	77.1
473.astar	8	639	87.9	645	87.1	**644**	**87.2**	8	608	92.4	606	92.7	**607**	**92.5**
483.xalancbmk	8	415	133	**416**	**133**	417	133	8	415	133	**416**	**133**	417	133

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

Compiler Invocation Notes

```
Binaries have been built under SLES10 SP1
```

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
OMP_NUM_THREADS set to number of cores (default).
```

Platform Notes

```
BIOS configuration:
Enhanced Speedstep Technology = Disable
C1 Enhanced Mode = Disable
Hardware Prefetch = Disable, Adjacent Sector Prefetch = Disable
SnoopFilter = Enable
```

General Notes

```
For information about Fujitsu Siemens Computers please see:
http://www.fujitsu-siemens.com
```

Base Compiler Invocation

C benchmarks:

```
/opt/intel/cc/10.1.017/bin/icc -L/opt/intel/cc/10.1.017/lib
-I/opt/intel/cc/10.1.017/include
```

Continued on next page

Base Compiler Invocation (Continued)

C++ benchmarks:
/opt/intel/cc/10.1.017/bin/icpc -L/opt/intel/cc/10.1.017/lib
-I/opt/intel/cc/10.1.017/include

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/opt/SmartHeap_8.1/lib -lsmartheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
/opt/intel/cc/10.1.017/bin/icc -L/opt/intel/cc/10.1.017/lib
-I/opt/intel/cc/10.1.017/include

401.bzip2: icc

456.hmmer: icc

C++ benchmarks:
/opt/intel/cc/10.1.017/bin/icpc -L/opt/intel/cc/10.1.017/lib
-I/opt/intel/cc/10.1.017/include

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

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/opt/SmartHeap_8.1/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/opt/SmartHeap_8.1/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/flags-ic101-linux-intel64.20090714.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/flags-ic101-linux-intel64.20090714.xml`

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