SPEC® CINT2006 Result

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Fujitsu Siemens Computers

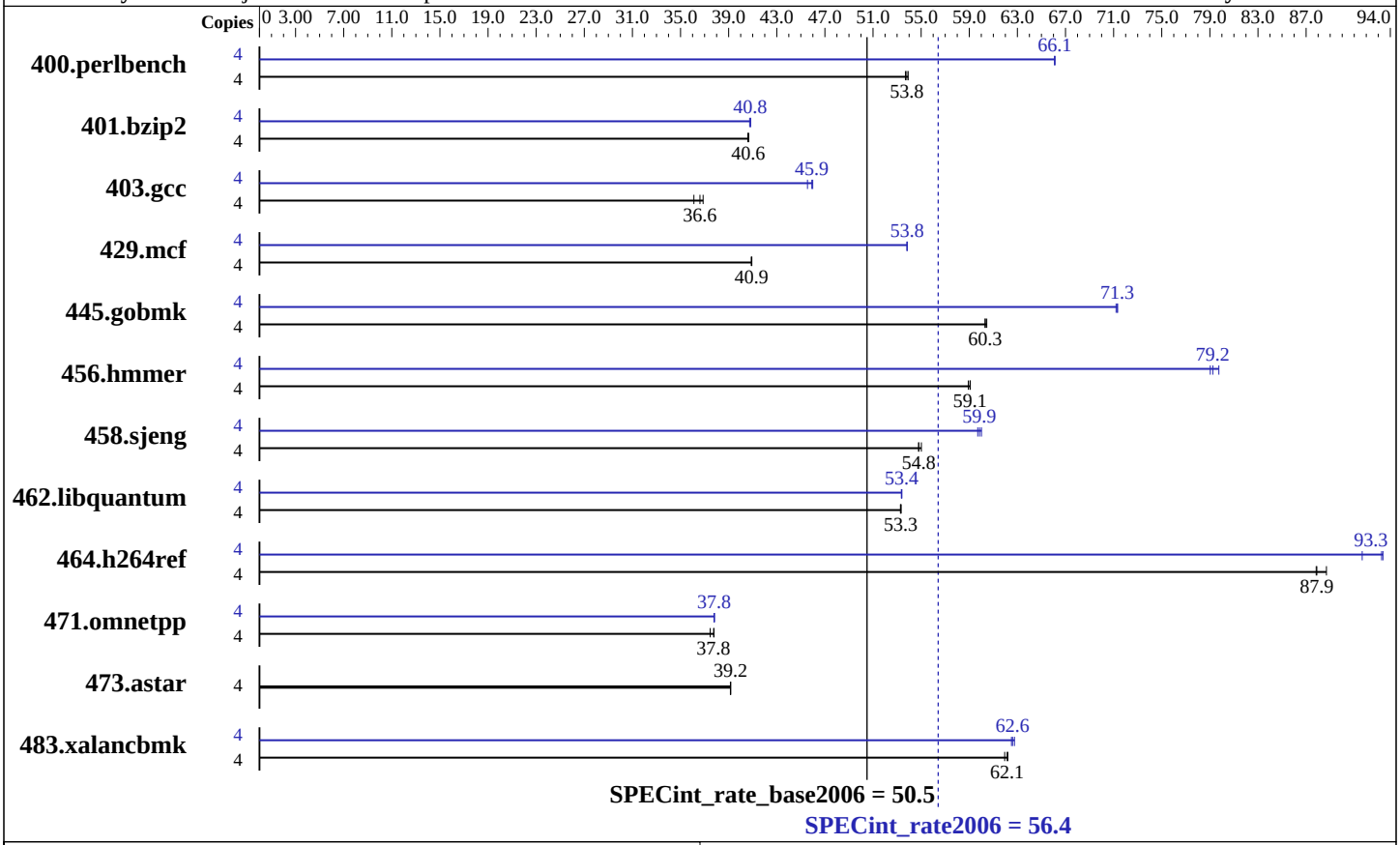
CELSIUS V840, Opteron 2222, 64-bit Linux

SPECint®_rate2006 = 56.4

SPECint_rate_base2006 = 50.5

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

Test date: Jul-2007
Hardware Availability: Jul-2007
Software Availability: Mar-2007



Hardware

CPU Name:	AMD Opteron 2222
CPU Characteristics:	Dual Core, 3.0 GHz, 2 MB L2-cache
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	1 MB I+D on chip per core
L3 Cache:	None
Other Cache:	None
Memory:	16 GB (8x2GB DDR2-667 CL5 dual rank ECC DIMMs registered)
Disk Subsystem:	SATA II, 80 GB
Other Hardware:	None

Software

Operating System:	SLES 10 for AMD64/EM64T
Compiler:	QLogic PathScale Compiler Suite, - Release 3.0
Auto Parallel:	No
File System:	ext3
System State:	Multi-User SuSE Run Level 3
Base Pointers:	32/64-bit
Peak Pointers:	32/64-bit
Other Software:	SmartHeap 8.1

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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	728	53.7	**726**	**53.8**	725	53.9	4	591	66.1	**591**	**66.1**	591	66.1
401.bzip2	4	949	40.7	**950**	**40.6**	951	40.6	4	**946**	**40.8**	947	40.7	946	40.8
403.gcc	4	873	36.9	**879**	**36.6**	892	36.1	4	**701**	**45.9**	700	46.0	707	45.6
429.mcf	4	891	40.9	**892**	**40.9**	892	40.9	4	678	53.8	**678**	**53.8**	678	53.8
445.gobmk	4	694	60.5	696	60.3	**695**	**60.3**	4	588	71.3	**588**	**71.3**	589	71.2
456.hmmer	4	**632**	**59.1**	632	59.1	633	58.9	4	**471**	**79.2**	468	79.7	472	79.0
458.sjeng	4	**883**	**54.8**	883	54.8	880	55.0	4	806	60.0	811	59.7	**809**	**59.9**
462.libquantum	4	1554	53.3	1556	53.3	**1555**	**53.3**	4	1553	53.4	**1553**	**53.4**	1552	53.4
464.h264ref	4	1008	87.8	998	88.7	**1007**	**87.9**	4	966	91.7	**949**	**93.3**	948	93.4
471.omnetpp	4	662	37.8	**662**	**37.8**	667	37.5	4	**662**	**37.8**	662	37.8	661	37.8
473.astar	4	**717**	**39.2**	717	39.2	717	39.1	4	**717**	**39.2**	717	39.2	717	39.1
483.xalancbmk	4	444	62.2	**444**	**62.1**	446	61.9	4	440	62.8	442	62.5	**441**	**62.6**

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

Operating System Notes

```
powersave -f is applied to set CPU to maximum frequency prior to run
stacksize is set to unlimited prior to run
```

General Notes

```
BIOS default settings with
Node memory interleave disabled, SRAT enabled
'taskset $MYMASK $command' has been used to bind processes to CPUs
The Linux command 'taskset $MYMASK $command' executes the specified command;
only the processors specified in $MYMASK are allowed to execute the application.
See the Linux documentation for detailed description of taskset.

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http://www.fujitsu-siemens.com/countries
```

Base Compiler Invocation

C benchmarks:
`pathcc`

C++ benchmarks:
`pathCC`

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-Ofast -OPT:malloc_alg=1

C++ benchmarks:
-Ofast -m32 -L/opt/SmartHeap_8.1/lib -lsmartheap

Base Other Flags

C benchmarks:
-IPA:max_jobs=4

C++ benchmarks:
-IPA:max_jobs=4

Peak Compiler Invocation

C benchmarks:
pathcc

C++ benchmarks:
pathCC

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64

Continued on next page

Peak Portability Flags (Continued)

458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -Ofast -LNO:opt=0

401.bzip2: -O3 -LNO:ou_prod_max=10 -OPT:Ofast -OPT:alias=disjoint

403.gcc: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -m32 -O3 -OPT:Ofast

429.mcf: -m32 -O3 -ipa -L/opt/SmartHeap_8.1/lib -lsmartheap

445.gobmk: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -O3 -OPT:alias=disjoint -LNO:simd=0 -LNO:minvariant=off -WOPT:retype_expr=on

456.hmmer: -O2 -OPT:alias=disjoint -OPT:malloc_alg=1 -CG:cflow=0

458.sjeng: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -O3 -IPA:plimit=50000 -IPA:pu_reorder=2

462.libquantum: -O3 -ipa -CG:local_fwd_sched=on -IPA:space=1000

464.h264ref: -fb_create fbdata(pass 1) -fb_opt fbdata(pass 2) -O3 -IPA:plimit=20000 -OPT:alias=disjoint -LNO:prefetch=0

C++ benchmarks:

471.omnetpp: -Ofast -CG:gcm=off -m32 -L/opt/SmartHeap_8.1/lib -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -Ofast -m32 -OPT:unroll_times_max=8 -L/opt/SmartHeap_8.1/lib -lsmartheap

Peak Other Flags

C benchmarks:
```
-IPA:max_jobs=4
```

C++ benchmarks:
```
-IPA:max_jobs=4
```

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.28.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.28.xml`

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