SPEC® CINT2006 Result

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Fujitsu Siemens Computers

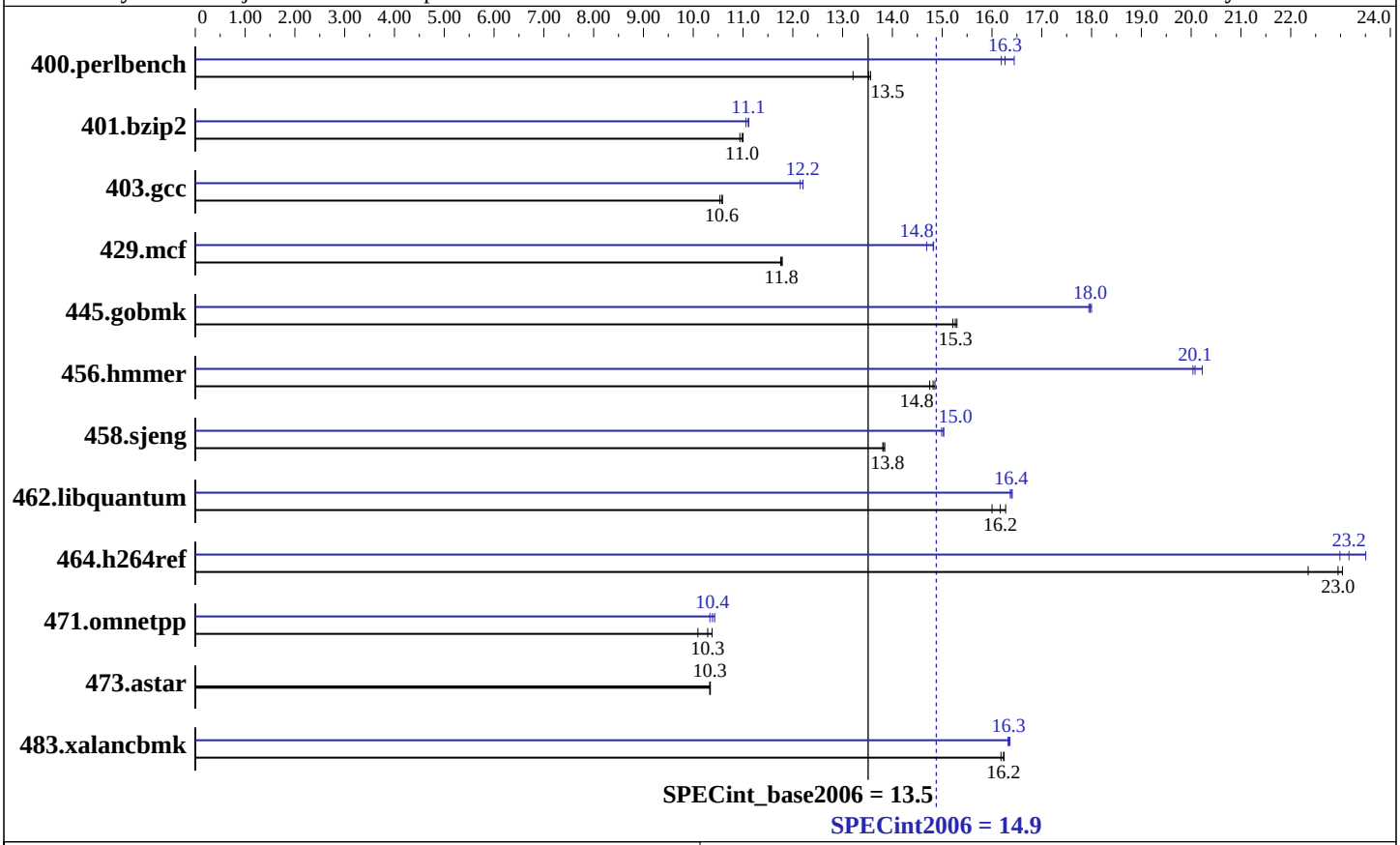
CELSIUS V840, Opteron 2222, 64-bit Linux

SPECint®2006 = 14.9

SPECint_base2006 = 13.5

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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	740	13.2	720	13.6	**722**	**13.5**	**601**	**16.3**	604	16.2	594	16.4
401.bzip2	882	10.9	877	11.0	**879**	**11.0**	**869**	**11.1**	868	11.1	873	11.1
403.gcc	760	10.6	**761**	**10.6**	764	10.5	660	12.2	**660**	**12.2**	663	12.1
429.mcf	776	11.8	774	11.8	**775**	**11.8**	615	14.8	**615**	**14.8**	621	14.7
445.gobmk	686	15.3	**687**	**15.3**	689	15.2	585	17.9	583	18.0	**584**	**18.0**
456.hmmer	628	14.9	633	14.7	**630**	**14.8**	461	20.2	466	20.0	**465**	**20.1**
458.sjeng	874	13.8	876	13.8	**875**	**13.8**	805	15.0	807	15.0	**805**	**15.0**
462.libquantum	1295	16.0	**1282**	**16.2**	1273	16.3	1263	16.4	1266	16.4	**1264**	**16.4**
464.h264ref	990	22.3	961	23.0	**964**	**23.0**	963	23.0	**955**	**23.2**	941	23.5
471.omnetpp	**607**	**10.3**	602	10.4	619	10.1	599	10.4	605	10.3	**602**	**10.4**
473.astar	680	10.3	**679**	**10.3**	679	10.3	680	10.3	**679**	**10.3**	679	10.3
483.xalancbmk	**425**	**16.2**	425	16.2	426	16.2	422	16.4	423	16.3	**422**	**16.3**

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

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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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