SPEC® CINT2006 Result

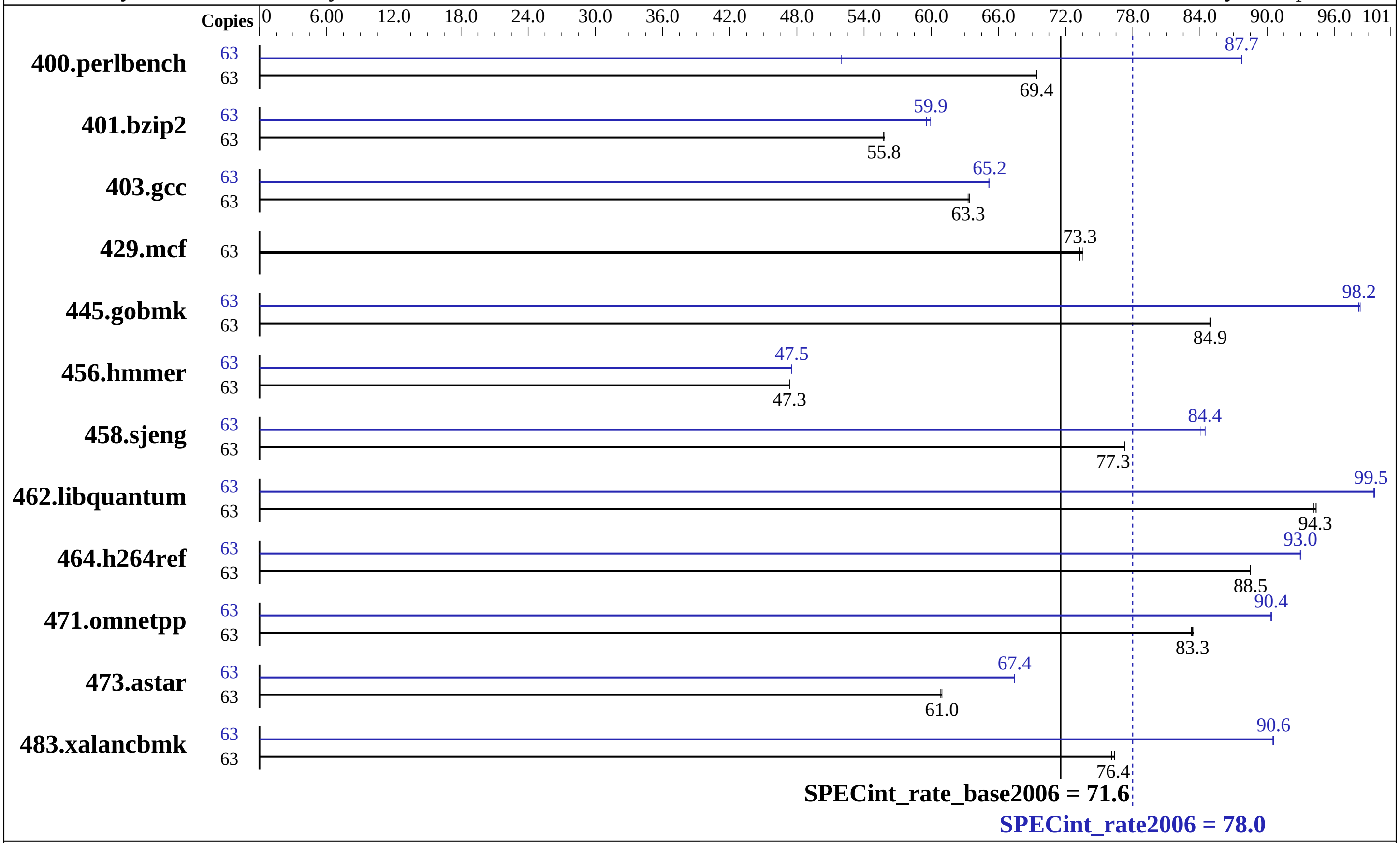
Sun Microsystems

SPARC Enterprise T5220 (gccfss)

SPECint®_rate2006 = 78.0

SPECint_rate_base2006 = 71.6

CPU2006 license: 6		**Test date:**	Sep-2007
Test sponsor:	Sun Microsystems	**Hardware Availability:**	Oct-2007
Tested by:	Sun Microsystems	**Software Availability:**	Sep-2007



Hardware

CPU Name:	UltraSPARC T2
CPU Characteristics:	
CPU MHz:	1417
FPU:	Integrated
CPU(s) enabled:	8 cores, 1 chip, 8 cores/chip, 8 threads/core
CPU(s) orderable:	1 chip
Primary Cache:	16 KB I + 8 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip
L3 Cache:	None
Other Cache:	None
Memory:	64 GB
Disk Subsystem:	100 GB Solaris Volume Manager RAID 0, interlace 384KB, on 2 x SUN72G 10K RPM SAS ufs fragment size 8192 bytes
Other Hardware:	None

Software

Operating System:	Solaris 10 8/07 (build s10s_u4wos_12b)
Compiler:	gccfss V4.0.4 (see detail below)
Auto Parallel:	No
File System:	ufs
System State:	Default
Base Pointers:	32-bit
Peak Pointers:	32-bit
Other Software:	None

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Results Table

	Base							Peak						
Benchmark	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
400.perlbench	63	8870	69.4	**8867**	**69.4**	8866	69.4	63	**7017**	**87.7**	7014	87.8	11847	52.0
401.bzip2	63	10886	55.8	**10901**	**55.8**	10912	55.7	63	10140	60.0	**10141**	**59.9**	10206	59.6
403.gcc	63	8014	63.3	7996	63.4	**8013**	**63.3**	63	**7777**	**65.2**	7795	65.1	7777	65.2
429.mcf	63	7812	73.5	**7842**	**73.3**	7842	73.3	63	7812	73.5	**7842**	**73.3**	7842	73.3
445.gobmk	63	7786	84.9	7779	85.0	**7782**	**84.9**	63	6732	98.2	**6729**	**98.2**	6722	98.3
456.hmmer	63	**12418**	**47.3**	12421	47.3	12418	47.3	63	12362	47.5	**12362**	**47.5**	12361	47.6
458.sjeng	63	9863	77.3	**9866**	**77.3**	9867	77.3	63	9026	84.5	**9027**	**84.4**	9065	84.1
462.libquantum	63	13862	94.2	**13842**	**94.3**	13830	94.4	63	13107	99.6	13115	99.5	**13114**	**99.5**
464.h264ref	63	15754	88.5	**15752**	**88.5**	15751	88.5	63	15000	92.9	**14995**	**93.0**	14987	93.0
471.omnetpp	63	4730	83.2	**4725**	**83.3**	4719	83.4	63	4361	90.3	4355	90.4	**4358**	**90.4**
473.astar	63	**7256**	**61.0**	7268	60.8	7256	61.0	63	6559	67.4	6556	67.5	**6557**	**67.4**
483.xalancbmk	63	5690	76.4	5712	76.1	**5692**	**76.4**	63	4803	90.5	4798	90.6	**4799**	**90.6**

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

Compiler Invocation Notes

```
The compiler is gccfss, "GCC for SPARC Systems", which
combines gcc with the Sun Code Generator for SPARC systems.
It is invoked as "gcc", and accepts source code compatible
with GCC 4.0.  For more information, including support, see
http://cooltools.sunsource.net/gcc/
```

Operating System Notes

```
Processes were bound to cores using "submit" and "pbind".

ulimit -s 131072 was used to limit the space
consumed by the stack (and therefore make more
space available to the heap).

 /etc/system parameters
    autoup=600
       Causes pages older than the listed number of seconds to
       be written by fsflush.
    tune_t_fsflushr=10
       Controls how many seconds elapse between runs of the
       page flush daemon, fsflush.

 The "webconsole" service was turned off using
     svcadm disable webconsole
```

Base Compiler Invocation

C benchmarks:
`gcc`

C++ benchmarks:
`g++`

Base Portability Flags

400.perlbench: `-DSPEC_CPU_SOLARIS_SPARC`
462.libquantum: `-DSPEC_CPU_SOLARIS -DSPEC_CPU_NEED_COMPLEX_I`
483.xalancbmk: `-DSPEC_CPU_SOLARIS`

Base Optimization Flags

C benchmarks:
`-fast -xipo=2 -xpagesize=4M -xprefetch_level=2`

C++ benchmarks:
`-fast -xipo=2 -xpagesize=4M -xprefetch_level=2`

Peak Compiler Invocation

C benchmarks:
`gcc`

C++ benchmarks:
`g++`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_SOLARIS_SPARC`
462.libquantum: `-DSPEC_CPU_SOLARIS -DSPEC_CPU_NEED_COMPLEX_I`
483.xalancbmk: `-DSPEC_CPU_SOLARIS`

Peak Optimization Flags

C benchmarks:

400.perlbench: `-xprofile=collect:./feedback`(pass 1)
`-xprofile=use:./feedback`(pass 2) `-fast -xipo=2`
`-xpagesize=4M -xprefetch_level=2 -xalias_level=std`

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Peak Optimization Flags (Continued)

400.perlbench (continued):
-xrestrict -lfast

401.bzip2: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=4M -xalias_level=strong

403.gcc: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=4M -xalias_level=std

429.mcf: basepeak = yes

445.gobmk: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=4M

456.hmmer: Same as 403.gcc

458.sjeng: Same as 445.gobmk

462.libquantum: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xtarget=ultra3cu -xarch=v8plusb -xpagesize=4M
-xprefetch_level=2

464.h264ref: Same as 403.gcc

C++ benchmarks:

471.omnetpp: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=4M -xalias_level=std

473.astar: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=4M -xalias_level=std -lfast

483.xalancbmk: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=4M -lfast

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12-and-gccfss.20090714.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12-and-gccfss.20090714.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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