SPEC® CINT2006 Result

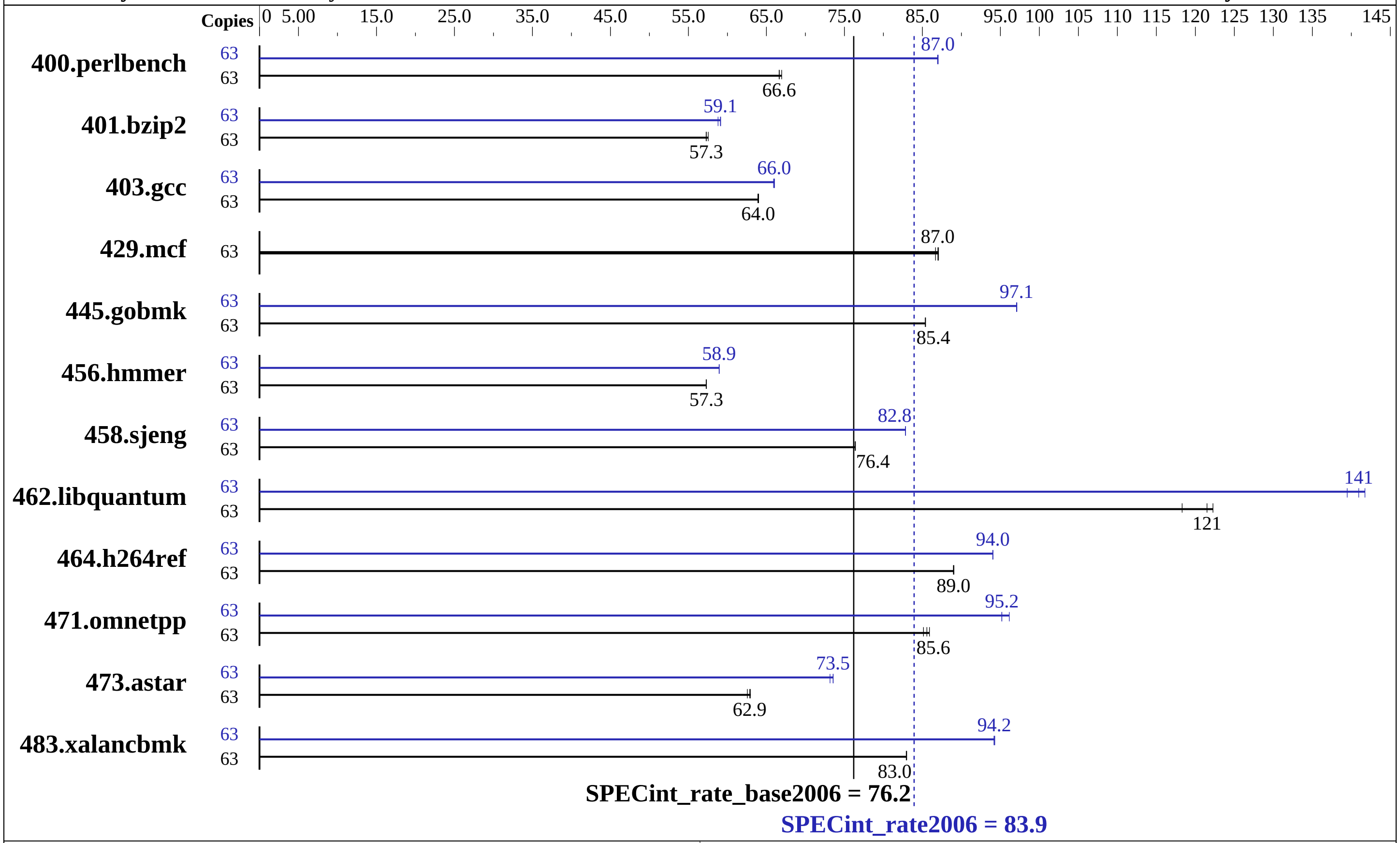
Sun Microsystems

Sun SPARC Enterprise T5120 (gccfss)

SPECint®_rate2006 = 83.9

SPECint_rate_base2006 = 76.2

CPU2006 license: 6		**Test date:**	Jan-2008
Test sponsor:	Sun Microsystems	**Hardware Availability:**	Oct-2007
Tested by:	Sun Microsystems	**Software Availability:**	Jan-2008



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:	384 GB Solaris Volume Manager RAID 0, interlace 384KB, on 4x SUN146G 10K RPM SAS drives ufs fragment size 8192 bytes
Other Hardware:	None

Software

Operating System:	Solaris 10 8/07 (build s10s_u4wos_12b)
Compiler:	gccfss V4.2.0 (build 20071213) See additional 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

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	63	9193	67.0	9237	66.6	**9236**	**66.6**	63	7079	86.9	7073	87.0	**7075**	**87.0**
401.bzip2	63	10615	57.3	10565	57.5	**10612**	**57.3**	63	**10288**	**59.1**	10281	59.1	10339	58.8
403.gcc	63	7924	64.0	7936	63.9	**7930**	**64.0**	63	**7683**	**66.0**	7694	65.9	7680	66.0
429.mcf	63	6599	87.1	**6606**	**87.0**	6628	86.7	63	6599	87.1	**6606**	**87.0**	6628	86.7
445.gobmk	63	7737	85.4	**7740**	**85.4**	7741	85.4	63	6809	97.1	6805	97.1	**6807**	**97.1**
456.hmmer	63	10263	57.3	**10260**	**57.3**	10259	57.3	63	9973	58.9	9973	58.9	**9973**	**58.9**
458.sjeng	63	9980	76.4	**9978**	**76.4**	9975	76.4	63	**9202**	**82.8**	9201	82.8	9202	82.8
462.libquantum	63	**10744**	**121**	11034	118	10677	122	63	9359	139	9209	142	**9261**	**141**
464.h264ref	63	15657	89.0	15668	89.0	**15667**	**89.0**	63	**14826**	**94.0**	14829	94.0	14825	94.0
471.omnetpp	63	**4601**	**85.6**	4584	85.9	4625	85.1	63	4095	96.1	**4136**	**95.2**	4137	95.2
473.astar	63	**7037**	**62.9**	7025	63.0	7070	62.6	63	6045	73.2	6012	73.6	**6013**	**73.5**
483.xalancbmk	63	5242	82.9	5238	83.0	**5240**	**83.0**	63	4611	94.3	4616	94.2	**4613**	**94.2**

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 4.2.  For more information, including support, see
http://cooltools.sunsource.net/gcc/
```

Operating System Notes

```
Processes were bound to cores using "submit" and "pbind".
A processor set was created using
  psrset -c 1-63
and the runspec process was placed into the set using
  psrset -e 1

ulimit -s 131072 was used to allow the stack to grow
up to 131072 KB (aka 128 MB).  Note that saying "131072"
is preferable to "unlimited", because there is a tradeoff
between space for the stack vs. space for 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.
```

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Operating System Notes (Continued)

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

Platform Notes

```
This result was measured on a Sun SPARC Enterprise
T5120.  These models are electronically equivalent:
  - Sun SPARC Enterprise T5120
  - Fujitsu SPARC Enterprise T5120
```

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=no%auto`

C++ benchmarks:
`-fast -xipo=2 -xpagesize=4M -xprefetch=no%auto`

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=no%auto -xalias_level=std
-xrestrict -lfast

401.bzip2: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=4M -xprefetch=no%auto -xalias_level=strong

403.gcc: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=4M -xprefetch=no%auto -xalias_level=std

429.mcf: basepeak = yes

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

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

458.sjeng: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xipo=2
-xpagesize=4M -xprefetch=no%auto

462.libquantum: -fast -xipo=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 -xprefetch=no%auto -xalias_level=std -lfast

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Peak Optimization Flags (Continued)

483.xalancbmk: `-xprofile=collect:./feedback`(pass 1) `-xprofile=use:./feedback`(pass 2) `-fast -xipo=2 -xpagesize=4M -xprefetch=no%auto -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-gccfss4.2.20090714.01.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12-and-gccfss4.2.20090714.01.xml

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

Tested with SPEC CPU2006 v1.0.1.
Report generated on Tue Jul 22 16:21:16 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 6 February 2008.