SPEC® CINT2006 Result

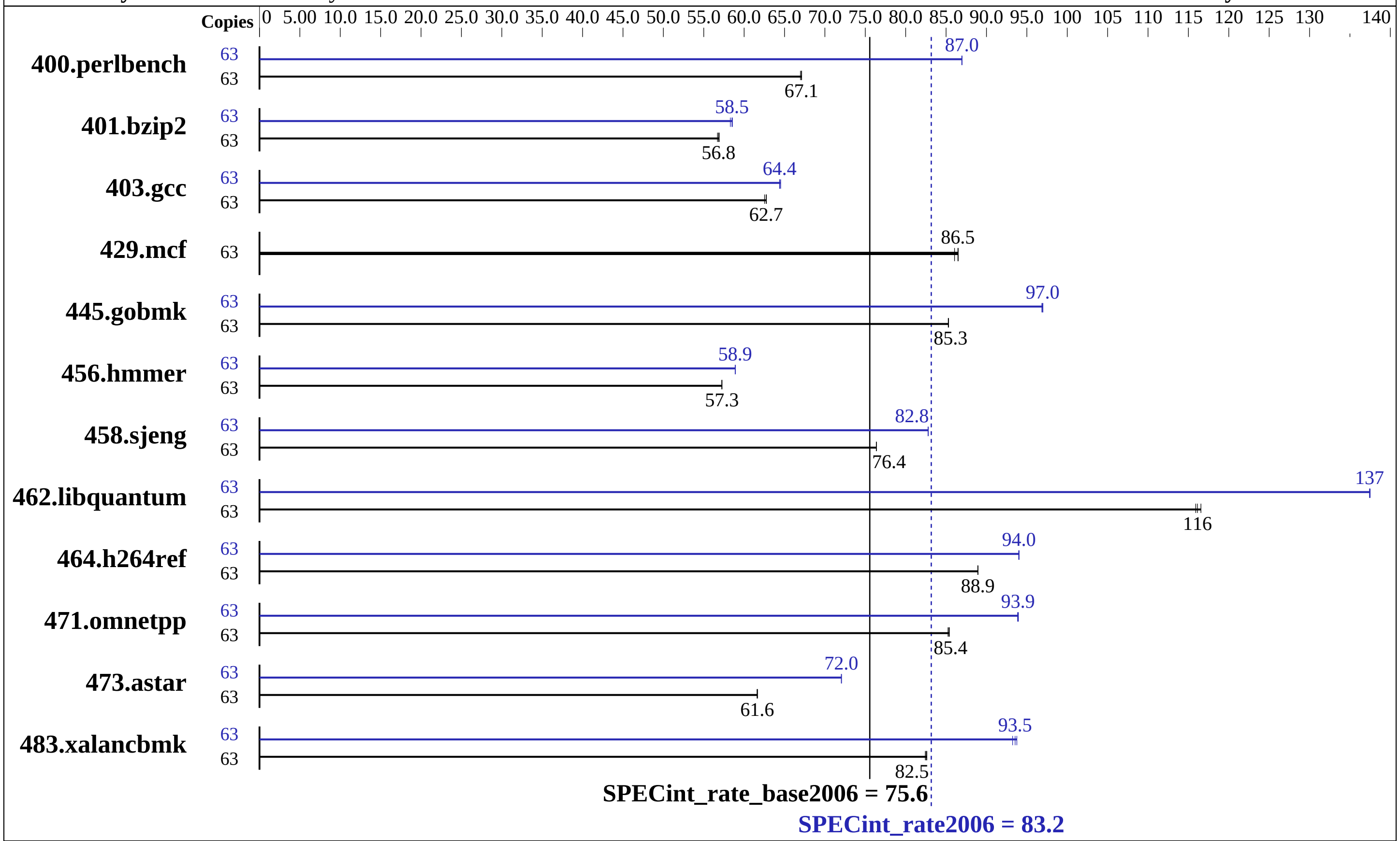
Fujitsu Limited

SPARC Enterprise T5220 (gccfss)

SPECint®_rate2006 = 83.2

SPECint_rate_base2006 = 75.6

CPU2006 license: 19		**Test date:**	Dec-2007
Test sponsor:	Fujitsu Limited	**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:	100 GB Solaris Volume Manager RAID 0+1, interlace 384KB, on 2 pairs of 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 V4.2.0 (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

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	63	9191	67.0	**9173**	**67.1**	9170	67.1	63	**7077**	**87.0**	7077	87.0	7080	86.9
401.bzip2	63	10682	56.9	**10695**	**56.8**	10722	56.7	63	10429	58.3	**10394**	**58.5**	10383	58.6
403.gcc	63	8081	62.8	**8085**	**62.7**	8111	62.5	63	7877	64.4	**7874**	**64.4**	7860	64.5
429.mcf	63	6677	86.0	**6645**	**86.5**	6642	86.5	63	6677	86.0	**6645**	**86.5**	6642	86.5
445.gobmk	63	**7747**	**85.3**	7747	85.3	7751	85.3	63	6814	97.0	**6817**	**97.0**	6824	96.9
456.hmmer	63	10270	57.2	10264	57.3	**10267**	**57.3**	63	9981	58.9	9979	58.9	**9979**	**58.9**
458.sjeng	63	9983	76.4	9981	76.4	**9982**	**76.4**	63	9207	82.8	**9210**	**82.8**	9210	82.8
462.libquantum	63	11200	117	11262	116	**11241**	**116**	63	9493	138	9498	137	**9498**	**137**
464.h264ref	63	**15677**	**88.9**	15673	89.0	15678	88.9	63	14834	94.0	14825	94.0	**14828**	**94.0**
471.omnetpp	63	**4613**	**85.4**	4610	85.4	4619	85.2	63	4195	93.9	**4193**	**93.9**	4191	94.0
473.astar	63	7179	61.6	7172	61.7	**7177**	**61.6**	63	6138	72.1	**6139**	**72.0**	6139	72.0
483.xalancbmk	63	5261	82.6	5274	82.4	**5266**	**82.5**	63	4636	93.8	**4647**	**93.5**	4662	93.2

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
```

General Notes

```
This result was measured on a Sun SPARC Enterprise T5220.
Sun SPARC Enterprise T5220 and Fujitsu SPARC Enterprise T5220
are electronically equivalent.
```

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-gccfss4.2.20090714.00.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12-and-gccfss4.2.20090714.00.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.
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