SPEC® CINT2006 Result

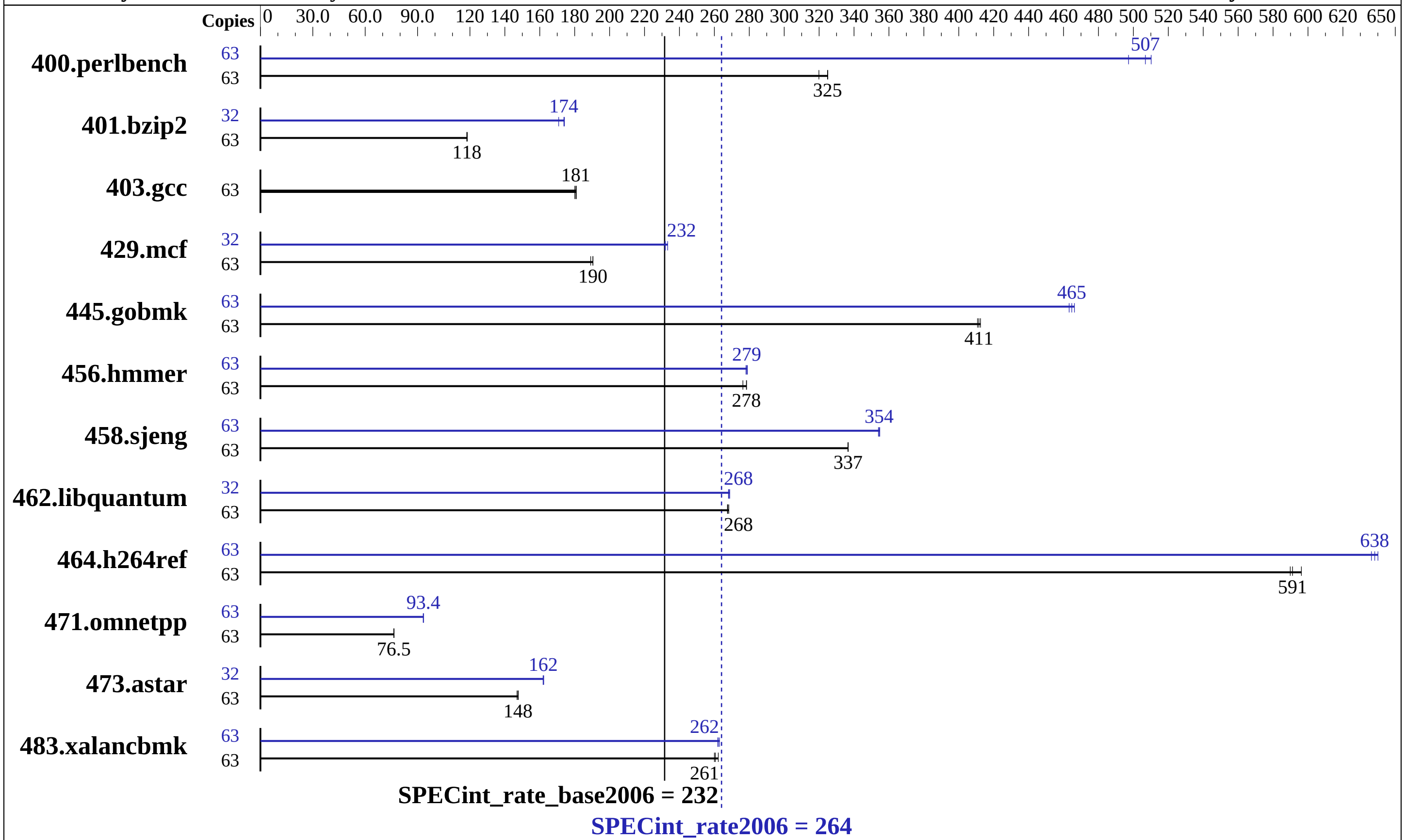
Fujitsu Limited

Fujitsu SPARC Enterprise M5000

SPECint®_rate2006 = 264

SPECint_rate_base2006 = 232

CPU2006 license: 19		**Test date:**	Jun-2008
Test sponsor:	Fujitsu Limited	**Hardware Availability:**	Jul-2008
Tested by:	Sun Microsystems	**Software Availability:**	Jul-2008



Hardware	
CPU Name:	SPARC64 VII
CPU Characteristics:	
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	32 cores, 8 chips, 4 cores/chip, 2 threads/core
CPU(s) orderable:	1 to 4 CPUM; each CPUM contains 2 CPU chips
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	5 MB I+D on chip per chip
L3 Cache:	None
Other Cache:	None
Memory:	128 GB (64 x 2 GB)
Disk Subsystem:	158 GB RAID 0 Solaris Volume 3 x Seagate 73 GB 10000 RPM Stripe interlace 512 Kbytes
Other Hardware:	None

Software	
Operating System:	Solaris 10 5/08 with patch 137111-03
Compiler:	Sun Studio 12 with patches 124867-06, 124861-07, 124863-05 (see patch information 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	**1895**	**325**	1894	325	1924	320	63	1238	497	**1214**	**507**	1206	510
401.bzip2	63	**5141**	**118**	5131	118	5141	118	32	1808	171	1774	174	**1777**	**174**
403.gcc	63	2817	180	2803	181	**2807**	**181**	63	2817	180	2803	181	**2807**	**181**
429.mcf	63	3016	190	3037	189	**3017**	**190**	32	**1258**	**232**	1251	233	1259	232
445.gobmk	63	1602	412	**1606**	**411**	1609	411	63	1427	463	**1422**	**465**	1418	466
456.hmmer	63	**2112**	**278**	2127	276	2111	278	63	2114	278	2108	279	**2110**	**279**
458.sjeng	63	**2264**	**337**	2265	336	2264	337	63	2149	355	2154	354	**2151**	**354**
462.libquantum	63	**4877**	**268**	4880	267	4866	268	32	**2470**	**268**	2467	269	2473	268
464.h264ref	63	**2358**	**591**	2338	596	2364	590	63	**2184**	**638**	2191	636	2178	640
471.omnetpp	63	**5150**	**76.5**	5156	76.4	5143	76.6	63	4224	93.2	**4216**	**93.4**	4214	93.4
473.astar	63	3009	147	2995	148	**2997**	**148**	32	**1387**	**162**	1387	162	1384	162
483.xalancbmk	63	**1668**	**261**	1672	260	1658	262	63	1653	263	1659	262	**1658**	**262**

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

Compiler Invocation Notes

```
Sun Studio compiler patches are available at
    http://developers.sun.com/sunstudio/downloads/patches/ss12_patches.jsp
```

Submit Notes

```
Processes were assigned to specific processors using 'pbind' commands.  The config
file option 'submit' was used, along with a list of processors in the 'BIND'
variable, to generate the pbind commands.  (For details, please see the config file.)
```

Operating System Notes

```
Environment Variable Settings:

ulimit -s 131072 was used to limit the space consumed
    by the stack (making more space available for the heap)

System Tunables (/etc/system parameters):

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

Continued on next page

Operating System Notes (Continued)

```
bufhwm=3000
    Memory byte limit for caching I/O buffers
segmap_percent=1
    Set maximum percent memory for file system cache
lpg_alloc_prefer=1
    Set lgroup page allocation to strongly prefer local pages

Other System Settings:

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

Platform Notes

```
Memory is 8-way interleaved by filling all slots with
the same capacity DIMMs.

This result is measured on a Sun SPARC Enterprise M5000 Server.
Note that the Sun SPARC Enterprise M5000 and Fujitsu SPARC Enterprise
M5000 are electrically equivalent.
```

Base Compiler Invocation

C benchmarks:
 cc

C++ benchmarks:
 CC

Base Portability Flags

400.perlbench: -DSPEC_CPU_SOLARIS_SPARC
403.gcc: -DSPEC_CPU_SOLARIS
462.libquantum: -DSPEC_CPU_SOLARIS
483.xalancbmk: -DSPEC_CPU_SOLARIS

Base Optimization Flags

C benchmarks:
 -fast -fma=fused -xipo=2 -xpagesize=4M -xprefetch_level=1
 -xalias_level=std -ll2amm

Continued on next page

Base Optimization Flags (Continued)

C++ benchmarks:

```
-xdepend -library=stlport4 -fast -fma=fused -xipo=2 -xpagesize=4M
-xprefetch_level=2 -xalias_level=compatible -lfast
```

Base Other Flags

C benchmarks:

```
-xjobs=16 -V -#
```

C++ benchmarks:

```
-xjobs=16 -verbose=diags,version
```

Peak Compiler Invocation

C benchmarks:

```
cc
```

C++ benchmarks:

```
CC
```

Peak Portability Flags

400.perlbench: -DSPEC_CPU_SOLARIS_SPARC
403.gcc: -DSPEC_CPU_SOLARIS
462.libquantum: -DSPEC_CPU_SOLARIS
483.xalancbmk: -DSPEC_CPU_SOLARIS

Peak Optimization Flags

C benchmarks:

400.perlbench: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
-xalias_level=std -xipo=2 -xrestrict -fma=fused -lfast

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

403.gcc: basepeak = yes

Continued on next page

Peak Optimization Flags (Continued)

429.mcf: -fast -xpagesize=4M -xipo=2 -xprefetch=no -xrestrict -xalias_level=std -lfast

445.gobmk: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -xpagesize=4M -xalias_level=std -xrestrict -fma=fused -ll2amm

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

458.sjeng: Same as 456.hmmer

462.libquantum: -fast -xpagesize=4M -xipo=2 -xprefetch=no -fma=fused -lbsdmalloc

464.h264ref: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -xpagesize=4M -xipo=2 -xalias_level=std -xprefetch=no -ll2amm

C++ benchmarks:

471.omnetpp: -xdepend -library=stlport4 -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -xpagesize=4M -xalias_level=compatible -xipo=2 -xprefetch_level=2 -Qoption cg -Qlp-av=0 -fma=fused -lfast

473.astar: -xdepend -library=stlport4 -fast -xpagesize=4M -xalias_level=compatible -xipo=2 -xprefetch_level=2 -fma=fused -lfast

483.xalancbmk: -xdepend -library=stlport4 -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -xpagesize=4M -xalias_level=compatible -xipo=2 -xprefetch=no -fma=fused -lfast

Peak Other Flags

C benchmarks:
-xjobs=16 -V -#

C++ benchmarks:
-xjobs=16 -verbose=diags,version

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12-and-gccfss4.2.20090713.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12-and-gccfss4.2.20090713.xml

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

Tested with SPEC CPU2006 v1.1.
Report generated on Tue Jul 22 18:47:52 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 5 August 2008.