SPEC® CINT2006 Result

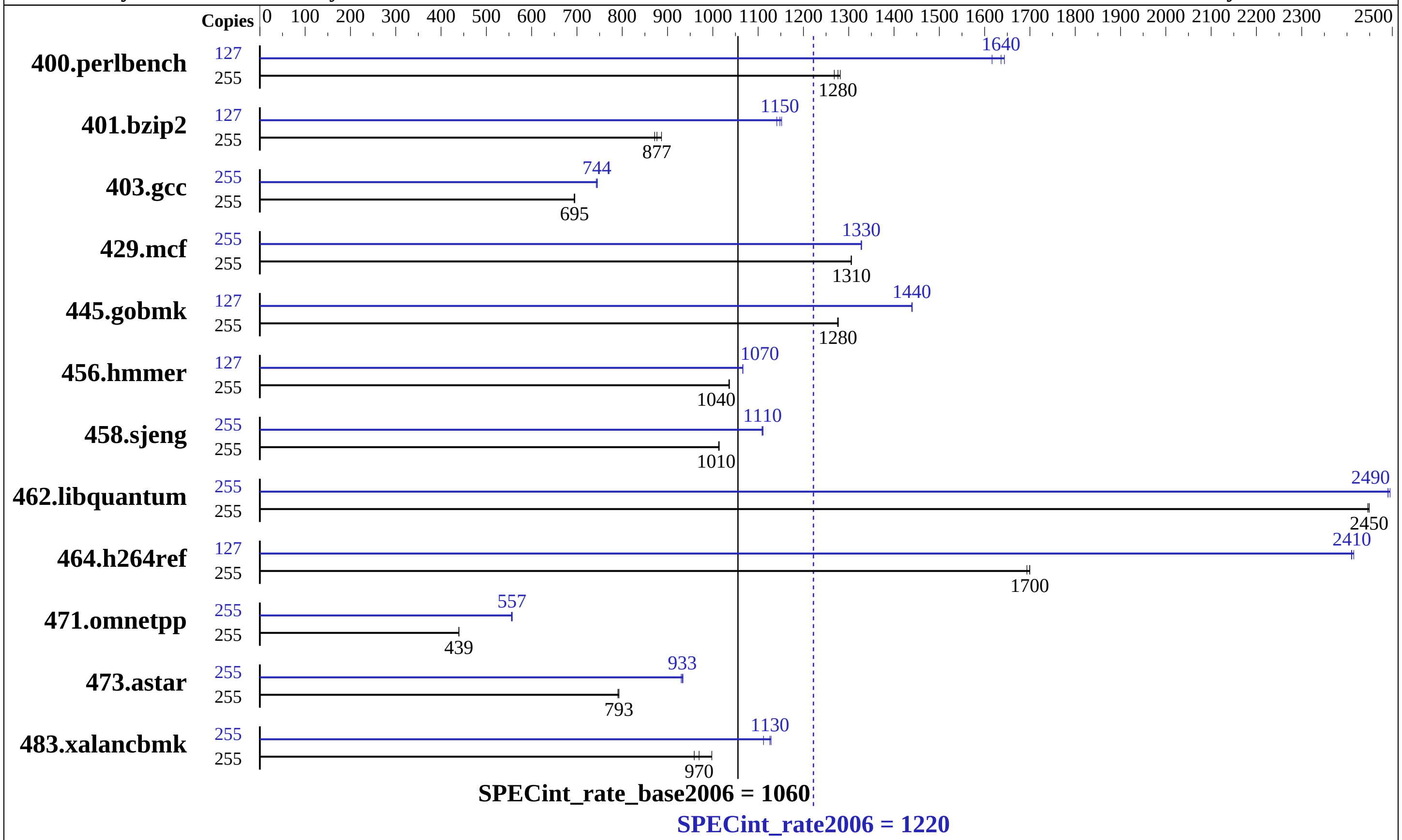
Fujitsu Limited

Fujitsu SPARC Enterprise M9000

SPECint®_rate2006 = 1220

SPECint_rate_base2006 = 1060

CPU2006 license:	19	**Test date:**	Mar-2007
Test sponsor:	Fujitsu Limited	**Hardware Availability:**	Apr-2007
Tested by:	Sun Microsystems	**Software Availability:**	Jul-2007



Hardware

CPU Name:	SPARC64 VI
CPU Characteristics:	
CPU MHz:	2280
FPU:	Integrated
CPU(s) enabled:	128 cores, 64 chips, 2 cores/chip, 2 threads/core
CPU(s) orderable:	1 to 16 CMUs; each CMU contains 2 or 4 chips
Primary Cache:	128 KB I + 128 KB D on chip per core
Secondary Cache:	5 MB I+D on chip per chip
L3 Cache:	None
Other Cache:	None
Memory:	1 TB (512 x 2 GB)
Disk Subsystem:	673 GB RAID 1+0 created by Solaris Volume Manager with 20 x 73 GB 10,000 RPM Fujitsu MAY2073RC SAS
Other Hardware:	None

Software

Operating System:	Solaris 10 7/07 (build s10s_u4wos_04)
Compiler:	Sun Studio 12 (build 44.0)
Auto Parallel:	No
File System:	ufs
System State:	Default
Base Pointers:	32-bit
Peak Pointers:	32-bit
Other Software:	None

SPEC CINT2006 Result

Fujitsu Limited

Fujitsu SPARC Enterprise M9000

SPECint_rate2006 = 1220

SPECint_rate_base2006 = 1060

CPU2006 license: 19
Test sponsor: Fujitsu Limited
Tested by: Sun Microsystems

Test date: Mar-2007
Hardware Availability: Apr-2007
Software Availability: Jul-2007

Results Table

	Base							Peak						
Benchmark	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	255	1965	1270	1944	1280	**1952**	**1280**	127	768	1620	**758**	**1640**	755	1640
401.bzip2	255	**2807**	**877**	2823	872	2775	887	127	1074	1140	**1068**	**1150**	1064	1150
403.gcc	255	2952	695	**2955**	**695**	2959	694	255	2764	743	**2758**	**744**	2755	745
429.mcf	255	1781	1310	**1781**	**1310**	1782	1310	255	1750	1330	**1752**	**1330**	1752	1330
445.gobmk	255	**2096**	**1280**	2094	1280	2097	1280	127	**926**	**1440**	926	1440	925	1440
456.hmmer	255	2295	1040	2298	1040	**2295**	**1040**	127	1111	1070	**1111**	**1070**	1111	1070
458.sjeng	255	**3046**	**1010**	3042	1010	3047	1010	255	2778	1110	**2780**	**1110**	2783	1110
462.libquantum	255	**2158**	**2450**	2157	2450	2160	2450	255	2118	2500	**2121**	**2490**	2121	2490
464.h264ref	255	**3320**	**1700**	3320	1700	3332	1690	127	**1166**	**2410**	1166	2410	1164	2410
471.omnetpp	255	3630	439	**3629**	**439**	3626	439	255	2860	557	**2863**	**557**	2870	555
473.astar	255	**2258**	**793**	2258	793	2265	790	255	**1919**	**933**	1916	934	1924	930
483.xalancbmk	255	1763	998	**1815**	**970**	1835	959	255	1582	1110	**1563**	**1130**	1559	1130

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

Operating System Notes

```
Processes were bound to cores using "submit" and "pbind".
The SPEC toolset was bound to processor 0.

These shell commands request use of local 4MB pages:
      export LD_PRELOAD=madv.so.1:mpss.so.1
      export MPSSHEAP=4MB
      export MPSSSTACK=4MB
      export MADV=access_lwp
'access_lwp' means that the next light weight
process to touch the specified address range
will access it the most heavily.

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=300
       Causes pages older than the listed number of seconds to
       be written by fsflush.
    bufhwm=3000
       Memory byte limit for caching I/O buffers
    segmap_percent=1
       Set maximum percent memory for file system cache
    tune_t_fsflushr=3
       Controls how many seconds elapse between runs of the
       page flush daemon, fsflush.
```

Continued on next page

Fujitsu Limited
Fujitsu SPARC Enterprise M9000

SPECint_rate2006 = 1220
SPECint_rate_base2006 = 1060

CPU2006 license: 19
Test sponsor: Fujitsu Limited
Tested by: Sun Microsystems
Test date: Mar-2007
Hardware Availability: Apr-2007
Software Availability: Jul-2007

Operating System Notes (Continued)

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

Platform Notes

```
"CMU" = CPU/Memory Unit; each holds 2 or 4 CPU chips.

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

This result was measured using a Sun SPARC Enterprise
M9000 Server.  Note that the Fujitsu SPARC Enterprise
M9000 and Sun SPARC Enterprise M9000 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 -xcache=128/64/2:5120/256/10 -xipo=2 -xpagesize=4M
-xprefetch_level=2 -lbsdmalloc

C++ benchmarks:
-xdepend -library=stlport4 -fast -fma=fused
-xcache=128/64/2:5120/256/10 -xipo=2 -xpagesize=4M -xprefetch_level=2
-lbsdmalloc

Base Other Flags

C benchmarks:
```
-xjobs=24 -V -#
```

C++ benchmarks:
```
-xjobs=24 -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 -xcache=128/64/2:5120/256/10 -xpagesize=4M -xalias_level=std -Xc -xipo=2 -xrestrict -fma=fused -xprefetch=latx:5 -lfast

401.bzip2: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -xcache=128/64/2:5120/256/10 -xpagesize=4M -xalias_level=strong -fma=fused -xprefetch=latx:5

403.gcc: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -xcache=128/64/2:5120/256/10 -xpagesize=4M -xipo=2 -xalias_level=std -xprefetch_level=2 -xarch=v8plusb -fma=fused -ll2amm

429.mcf: -fast -xcache=128/64/2:5120/256/10 -xpagesize=4M -xipo=2 -xprefetch_level=2 -xrestrict -xalias_level=std -W2,-Apf:llist=3 -W2,-Apf:noinnerllist -xprefetch=latx:5

Continued on next page

Peak Optimization Flags (Continued)

429.mcf (continued):
-lfast

445.gobmk: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast
-xcache=128/64/2:5120/256/10 -xpagesize=4M
-xalias_level=std -xrestrict -fma=fused

456.hmmer: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast
-xcache=128/64/2:5120/256/10 -xpagesize=4M -xipo=2
-fma=fused

458.sjeng: Same as 456.hmmer

462.libquantum: -fast -xcache=128/64/2:5120/256/10 -xpagesize=4M -xipo=2
-xprefetch_level=2 -fma=fused -xprefetch=latx:3
-lbsdmalloc

464.h264ref: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast
-xcache=128/64/2:5120/256/10 -xpagesize=4M -xipo=2
-xalias_level=std -xarch=v8plusb -ll2amm

C++ benchmarks:

471.omnetpp: -xdepend -library=stlport4
-xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast
-xcache=128/64/2:5120/256/10 -xpagesize=4M
-xalias_level=compatible -xipo=2 -xprefetch_level=2
-Qoption cg -Qlp-av=0 -fma=fused -lfast

473.astar: -xdepend -library=stlport4 -fast
-xcache=128/64/2:5120/256/10 -xpagesize=4M
-xalias_level=compatible -xipo=2 -xprefetch_level=2
-fma=fused -xprefetch=latx:5 -lfast

483.xalancbmk: -xdepend -library=stlport4
-xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast
-xcache=128/64/2:5120/256/10 -xpagesize=4M
-xalias_level=compatible -xipo=2 -xprefetch_level=2
-fma=fused -xprefetch=latx:5 -lfast

Fujitsu Limited
Fujitsu SPARC Enterprise M9000

SPECint_rate2006 = 1220
SPECint_rate_base2006 = 1060

CPU2006 license: 19
Test sponsor: Fujitsu Limited
Tested by: Sun Microsystems
Test date: Mar-2007
Hardware Availability: Apr-2007
Software Availability: Jul-2007

Peak Other Flags

C benchmarks:
`-xjobs=24 -V -#`

C++ benchmarks:
`-xjobs=24 -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-Studio12.20090714.02.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12.20090714.02.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 11:15:50 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 3 May 2007.