SPEC® CINT2006 Result

Fujitsu

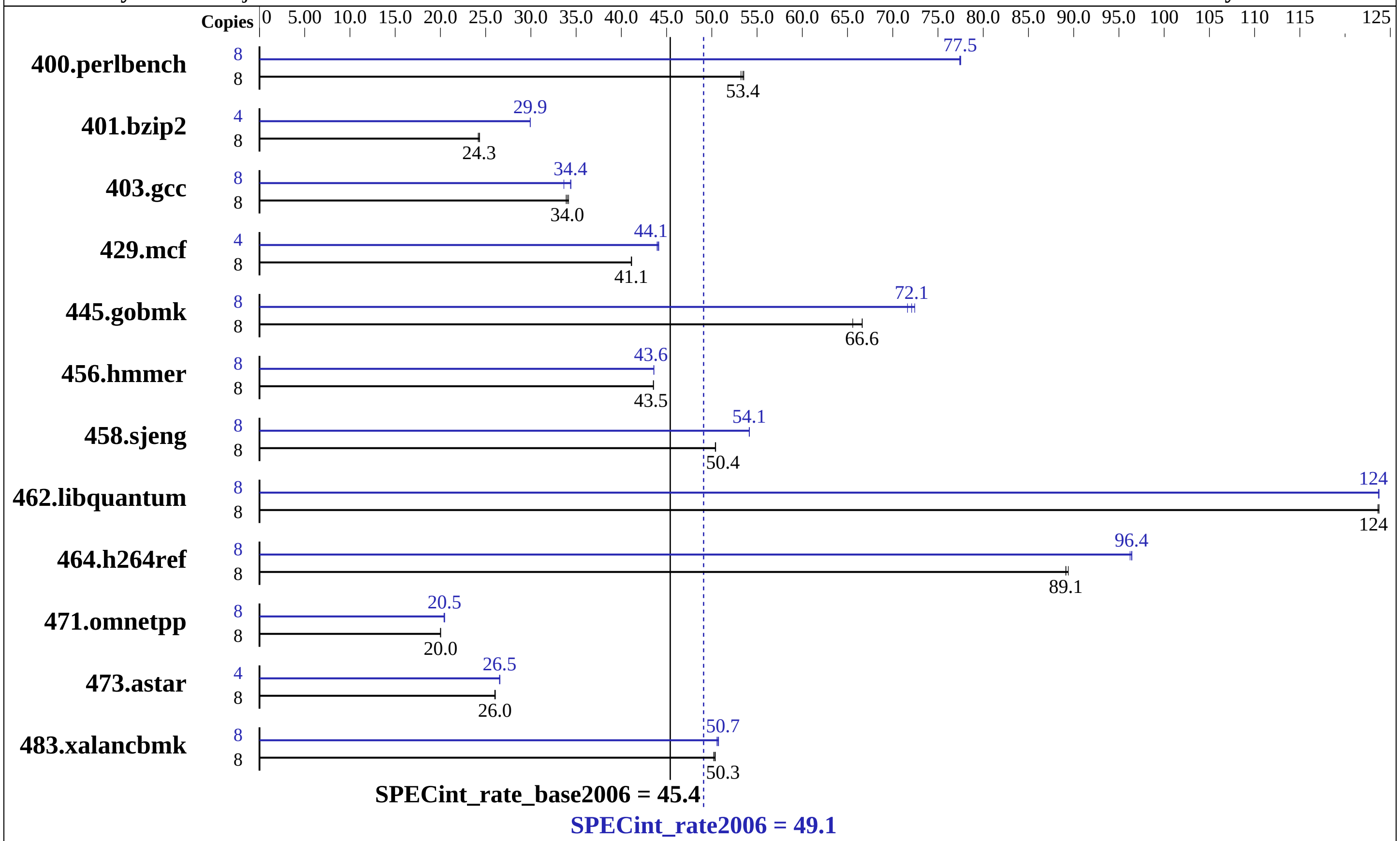
Fujitsu SPARC Enterprise M3000

SPECint®_rate2006 = 49.1

SPECint_rate_base2006 = 45.4

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

Test date: Oct-2009
Hardware Availability: Jan-2010
Software Availability: Oct-2009



Hardware

CPU Name:	SPARC64 VII
CPU Characteristics:	
CPU MHz:	2750
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip, 2 threads/core
CPU(s) orderable:	1 chip
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:	16 GB (8 x 2 GB), 2-way interleaved
Disk Subsystem:	1 x Seagate Savvio 10K.2 (146 GB 10,000 RPM SAS)
Other Hardware:	None

Software

Operating System:	Solaris 10 10/09 with patch 119963-18
Compiler:	Sun Studio 12 Update 1
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	8	1468	53.2	1460	53.5	**1463**	**53.4**	8	**1009**	**77.5**	1008	77.5	1010	77.4
401.bzip2	8	**3179**	**24.3**	3173	24.3	3193	24.2	4	1290	29.9	1290	29.9	**1290**	**29.9**
403.gcc	8	1900	33.9	1885	34.2	**1893**	**34.0**	8	1914	33.6	**1873**	**34.4**	1870	34.4
429.mcf	8	1776	41.1	1773	41.1	**1775**	**41.1**	4	**828**	**44.1**	826	44.1	830	43.9
445.gobmk	8	**1260**	**66.6**	1280	65.6	1259	66.6	8	1171	71.6	1159	72.4	**1164**	**72.1**
456.hmmer	8	**1714**	**43.5**	1715	43.5	1713	43.6	8	**1712**	**43.6**	1712	43.6	1712	43.6
458.sjeng	8	1919	50.4	1921	50.4	**1920**	**50.4**	8	1787	54.2	1788	54.1	**1788**	**54.1**
462.libquantum	8	1341	124	**1340**	**124**	1339	124	8	**1340**	**124**	1340	124	1339	124
464.h264ref	8	1986	89.1	1980	89.4	**1986**	**89.1**	8	1836	96.4	1840	96.2	**1837**	**96.4**
471.omnetpp	8	2500	20.0	**2497**	**20.0**	2496	20.0	8	2451	20.4	**2444**	**20.5**	2443	20.5
473.astar	8	**2158**	**26.0**	2160	26.0	2153	26.1	4	1058	26.5	1056	26.6	**1058**	**26.5**
483.xalancbmk	8	1096	50.4	1100	50.2	**1097**	**50.3**	8	**1089**	**50.7**	1088	50.8	1092	50.6

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/ss12u1_patches.jsp
```

Submit Notes

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

Operating System Notes

```
Shell Environments:

    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.
```

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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.

Other System Settings:

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

Platform Notes

```
Memory is 2-way interleaved by filling all slots with the same
capacity DIMMs.

This result is measured on a Fujitsu SPARC Enterprise M3000 Server.
Note that the Fujitsu SPARC Enterprise M3000 and Sun SPARC Enterprise
M3000 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 -xarch=sparcfmaf -xalias_level=std -ll2amm

C++ benchmarks:
-library=stlport4 -fast -fma=fused -xipo=2 -xpagesize=4M -xarch=sparcfmaf -xdepend -xalias_level=compatible -lfast

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Base Other Flags

C benchmarks:
`-xjobs=2 -V -#`

C++ benchmarks:
`-xjobs=2 -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 -M /usr/lib/ld/map.bssalign -fma=fused -xipo=2 -xalias_level=std -xrestrict -xprefetch=no%auto -Xc -lfast`

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

403.gcc: `-fast -xpagesize=4M -M /usr/lib/ld/map.bssalign -fma=fused -xipo=2 -xalias_level=std -ll2amm`

429.mcf: `-fast -xpagesize=4M -fma=fused -xipo=2 -xalias_level=std -ll2amm`

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

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Peak Optimization Flags (Continued)

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

458.sjeng: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
-fma=fused -xipo=2 -xprefetch=latx:0.5 -ll2amm

462.libquantum: Same as 429.mcf

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

C++ benchmarks:

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

473.astar: -library=stlport4 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
-xalias_level=compatible -M /usr/lib/ld/map.bssalign
-fma=fused -xipo=2 -xprefetch=no%auto -xdepend -lfast
-lbsdmalloc

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

Peak Other Flags

C benchmarks:
-xjobs=2 -V -#

C++ benchmarks:
-xjobs=2 -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-Studio12-12u1-and-gccfss4.2.r4.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12-12u1-and-gccfss4.2.r4.xml

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

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