SPEC® CINT2006 Result

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Fujitsu

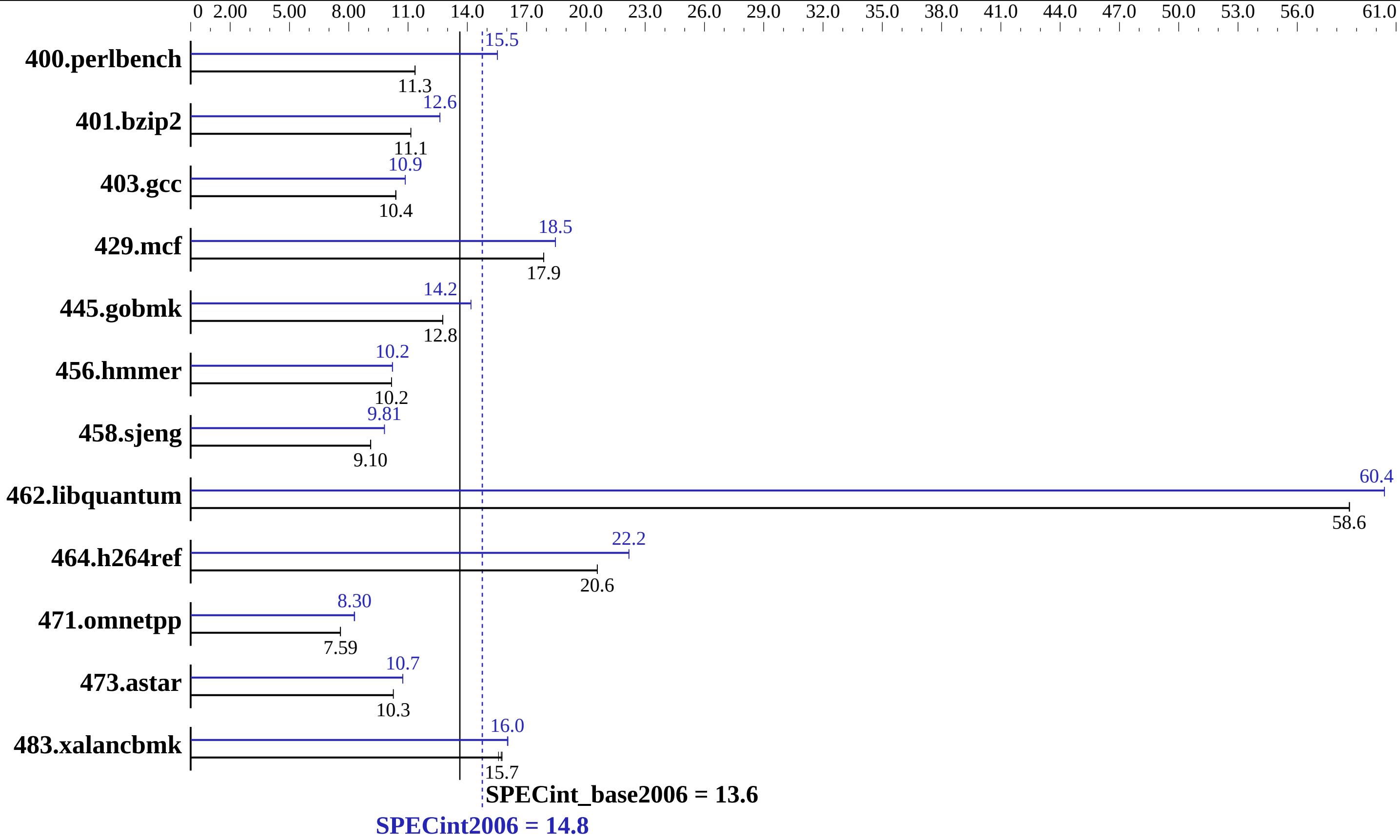
Fujitsu SPARC Enterprise M3000

SPECint®2006 = 14.8

SPECint_base2006 = 13.6

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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	**861**	**11.3**	861	11.3	860	11.4	629	15.5	**629**	**15.5**	629	15.5
401.bzip2	866	11.1	866	11.1	**866**	**11.1**	765	12.6	**765**	**12.6**	765	12.6
403.gcc	775	10.4	776	10.4	**775**	**10.4**	**741**	**10.9**	741	10.9	741	10.9
429.mcf	510	17.9	**510**	**17.9**	510	17.9	494	18.5	**494**	**18.5**	494	18.5
445.gobmk	**822**	**12.8**	822	12.8	822	12.8	**740**	**14.2**	740	14.2	740	14.2
456.hmmer	918	10.2	**918**	**10.2**	918	10.2	**913**	**10.2**	914	10.2	913	10.2
458.sjeng	1327	9.12	1330	9.10	**1330**	**9.10**	1234	9.80	**1233**	**9.81**	1233	9.81
462.libquantum	353	58.6	**353**	**58.6**	353	58.7	343	60.4	343	60.4	**343**	**60.4**
464.h264ref	**1076**	**20.6**	1075	20.6	1076	20.6	998	22.2	998	22.2	**998**	**22.2**
471.omnetpp	825	7.57	**824**	**7.59**	824	7.59	755	8.27	753	8.30	**753**	**8.30**
473.astar	**685**	**10.3**	684	10.3	685	10.3	**654**	**10.7**	654	10.7	654	10.7
483.xalancbmk	**439**	**15.7**	438	15.8	443	15.6	430	16.1	431	16.0	**430**	**16.0**

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 -xprefetch_level=2
-xalias_level=std -M /usr/lib/ld/map.bssalign -ll2amm
```

C++ benchmarks:
```
-xdepend -library=stlport4 -fast -fma=fused -xipo=2 -xpagesize=4M
-xprefetch_level=2 -xalias_level=compatible -M /usr/lib/ld/map.bssalign
-lfast
```

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Software Availability: Oct-2009

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 -fma=fused
-xpagesize=4M -M /usr/lib/ld/map.bssalign -xipo=2
-xalias_level=std -xrestrict -Xc -xprefetch=no%auto
-lfast

401.bzip2: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -fma=fused
-xpagesize=4M -xalias_level=strong -xprefetch=latx:0.9

403.gcc: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -fma=fused
-xpagesize=4M -xipo=2 -xarch=sparcvis2 -xalias_level=std
-xprefetch_auto_type=indirect_array_access
-xprefetch_level=2 -ll2amm

429.mcf: -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -fma=fused
-xpagesize=4M -xipo=2 -xprefetch_level=3 -W2,-Apf:llist=3
-W2,-Apf:noinnerllist -Wc,-Qlp-prt=1 -Wc,-Qlp-prwt=3

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Peak Optimization Flags (Continued)

429.mcf (continued):
-lfast

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

456.hmmer: -fast -fma=fused -xpagesize=4M -xipo=2 -xalias_level=std -xprefetch=latx:2.5 -ll2amm

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

462.libquantum: -fast -fma=fused -xipo=2 -xpagesize=4M -xprefetch_level=2 -xalias_level=std -xprefetch=latx:0.5 -M /usr/lib/ld/map.bssalign -ll2amm

464.h264ref: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -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 -fma=fused -xpagesize=4M -xalias_level=compatible -xipo=2 -xprefetch_level=2 -Qoption cg -Qlp-av=0 -xprefetch=latx:2.0 -lfast

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

483.xalancbmk: -xdepend -library=stlport4 -fast -fma=fused -xpagesize=4M -xalias_level=compatible -xipo=2 -xprefetch_level=3 -lfast

Peak Other Flags

C benchmarks:
-xjobs=2 -V -#

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Peak Other Flags (Continued)

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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