SPEC® CFP2006 Result

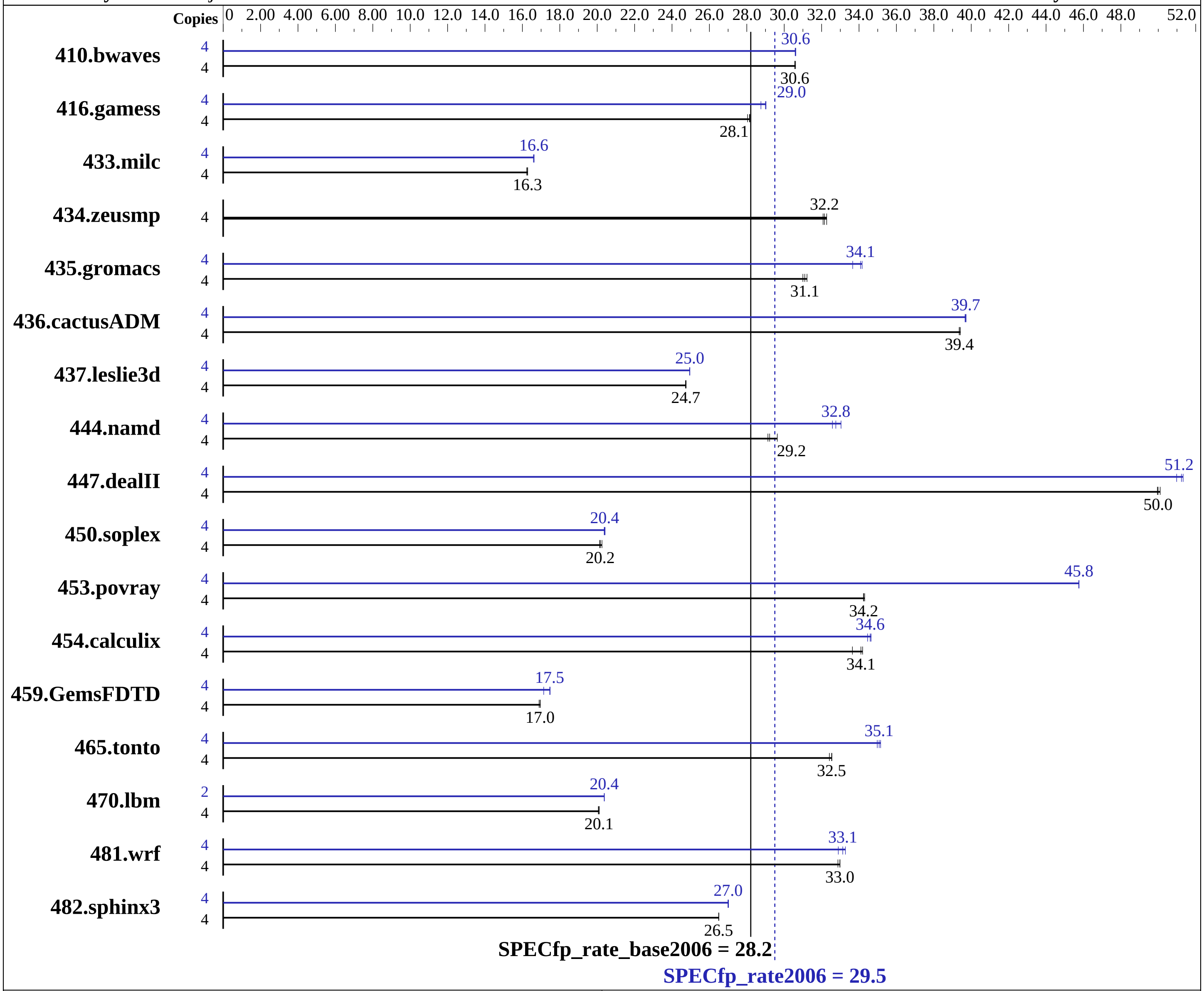
Fujitsu

Fujitsu SPARC Enterprise M3000

SPECfp®_rate2006 = 29.5

SPECfp_rate_base2006 = 28.2

CPU2006 license:	19	**Test date:**	Nov-2009
Test sponsor:	Fujitsu	**Hardware Availability:**	Jan-2010
Tested by:	Fujitsu	**Software Availability:**	Oct-2009



Hardware	
CPU Name:	SPARC64 VII
CPU Characteristics:	2 cores
CPU MHz:	2750
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 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

Continued on next page

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:	Apache C++ Standard Library V4.2.1

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

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	1779	30.6	**1778**	**30.6**	1776	30.6	4	1777	30.6	1776	30.6	**1776**	**30.6**
416.gamess	4	2781	28.2	**2783**	**28.1**	2793	28.0	4	2698	29.0	2724	28.8	**2701**	**29.0**
433.milc	4	2263	16.2	**2256**	**16.3**	2255	16.3	4	2213	16.6	2208	16.6	**2210**	**16.6**
434.zeusmp	4	1135	32.1	**1132**	**32.2**	1128	32.3	4	1135	32.1	**1132**	**32.2**	1128	32.3
435.gromacs	4	915	31.2	**918**	**31.1**	921	31.0	4	848	33.7	**838**	**34.1**	836	34.2
436.cactusADM	4	**1214**	**39.4**	1215	39.4	1213	39.4	4	1205	39.7	**1204**	**39.7**	1203	39.7
437.leslie3d	4	**1520**	**24.7**	1519	24.8	1521	24.7	4	1507	25.0	**1507**	**25.0**	1508	24.9
444.namd	4	1083	29.6	1101	29.1	**1098**	**29.2**	4	971	33.0	985	32.6	**979**	**32.8**
447.dealII	4	**915**	**50.0**	916	50.0	913	50.1	4	898	51.0	**893**	**51.2**	892	51.3
450.soplex	4	1657	20.1	**1654**	**20.2**	1647	20.3	4	1637	20.4	**1635**	**20.4**	1634	20.4
453.povray	4	**621**	**34.2**	622	34.2	620	34.3	4	465	45.8	**465**	**45.8**	465	45.7
454.calculix	4	965	34.2	**968**	**34.1**	981	33.6	4	958	34.5	**954**	**34.6**	953	34.6
459.GemsFDTD	4	**2504**	**17.0**	2512	16.9	2502	17.0	4	**2431**	**17.5**	2476	17.1	2427	17.5
465.tonto	4	**1210**	**32.5**	1214	32.4	1209	32.5	4	**1122**	**35.1**	1125	35.0	1120	35.2
470.lbm	4	2740	20.1	**2735**	**20.1**	2733	20.1	2	1348	20.4	**1348**	**20.4**	1349	20.4
481.wrf	4	**1355**	**33.0**	1355	33.0	1359	32.9	4	**1349**	**33.1**	1358	32.9	1343	33.3
482.sphinx3	4	2942	26.5	**2942**	**26.5**	2943	26.5	4	**2887**	**27.0**	2888	27.0	2885	27.0

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

The Apache C++ Standard Library V4.2.1 was installed from
   http://stdcxx.apache.org/download.html using:
     alias gmake=specmake
     gmake BUILDTYPE=8d CONFIG=sunpro.config
```

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.
    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.
```

General Notes

```
447.dealII (peak): "apache_stdcxx_4_2_1" src.alt was used.

447.dealII (base): "apache_stdcxx_4_2_1" src.alt was used.
```

Base Compiler Invocation

C benchmarks:
    cc

Continued on next page

Base Compiler Invocation (Continued)

C++ benchmarks:
`CC`

Fortran benchmarks:
`f90`

Benchmarks using both Fortran and C:
`cc f90`

Base Optimization Flags

C benchmarks:
```
-fast -fma=fused -xipo=2 -xpagesize=4M -xalias_level=std
-xprefetch_auto_type=indirect_array_access -xprefetch_level=3
-M /usr/lib/ld/map.bssalign -ll2amm
```

C++ benchmarks:
```
-xdepend -fast -fma=fused -xipo=2 -xpagesize=4M
-xalias_level=compatible -xprefetch=latx:0.5 -library=no%Cstd
-I/export/cpu2006-v1.1/stdcxx-4.2.1/include
-I/export/cpu2006-v1.1/stdcxx-4.2.1/build/include
-M /usr/lib/ld/map.bssalign
-L/export/cpu2006-v1.1/stdcxx-4.2.1/build/lib
-R/export/cpu2006-v1.1/stdcxx-4.2.1/build/lib -lstd8d
```

Fortran benchmarks:
```
-fast -fma=fused -xipo=2 -xpagesize=4M -xprefetch_level=2
-M /usr/lib/ld/map.bssalign -ll2amm
```

Benchmarks using both Fortran and C:
```
-fast(cc) -fast(f90) -fma=fused -xipo=2 -xpagesize=4M
-xalias_level=std -xprefetch_auto_type=indirect_array_access
-xprefetch_level=3 -xprefetch_level=2 -M /usr/lib/ld/map.bssalign
-ll2amm
```

Base Other Flags

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

C++ benchmarks:
`-xjobs=2 -verbose=diags,version`

Fortran benchmarks:
`-xjobs=2 -V -v`

Continued on next page

Fujitsu
Fujitsu SPARC Enterprise M3000

SPECfp_rate2006 = 29.5
SPECfp_rate_base2006 = 28.2

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu
Test date: Nov-2009
Hardware Availability: Jan-2010
Software Availability: Oct-2009

Base Other Flags (Continued)

Benchmarks using both Fortran and C:
-xjobs=2 -V -# -v

Peak Compiler Invocation

C benchmarks:
cc

C++ benchmarks:
CC

Fortran benchmarks:
f90

Benchmarks using both Fortran and C:
cc f90

Peak Optimization Flags

C benchmarks:

433.milc: -fast -fma=fused -xpagesize=4M -xipo=2 -xprefetch_level=2 -fsimple=1 -xprefetch_auto_type=indirect_array_access -W2,-Ainline:rs=400 -xalias_level=std

470.lbm: -fast -fma=fused -xpagesize=4M -xipo=2 -xarch=generic -xvector -xprefetch_level=3

482.sphinx3: -fast -fma=fused -xpagesize=4M -xipo=2 -xprefetch_level=1 -xalias_level=std -xprefetch_auto_type=indirect_array_access

C++ benchmarks:

444.namd: -xdepend -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xpagesize=4M -xalias_level=compatible -library=stlport4 -xipo=1 -xprefetch=no%auto -xlinkopt=2 -xunroll=2

447.dealII: -xdepend -fast -fma=fused -xpagesize=4M -xalias_level=compatible -library=no%Cstd -I/export/cpu2006-v1.1/stdcxx-4.2.1/include -I/export/cpu2006-v1.1/stdcxx-4.2.1/build/include -xipo=2 -xprefetch_level=2 -xprefetch=latx:0.5 -L/export/cpu2006-v1.1/stdcxx-4.2.1/build/lib -R/export/cpu2006-v1.1/stdcxx-4.2.1/build/lib -lstd8d

Continued on next page

Peak Optimization Flags (Continued)

450.soplex: -xdepend -fast -fma=fused -xpagesize=4M -xalias_level=compatible -library=stlport4 -xipo=2 -xprefetch=latx:0.5

453.povray: -xdepend -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -fma=fused -xpagesize=4M -xalias_level=compatible -library=stlport4 -xipo=2 -xlinkopt=2 -xprefetch=latx:4 -xunroll=4 -lfast

Fortran benchmarks:

410.bwaves: -fast -fma=fused -xpagesize=4M -xipo=2 -xprefetch_level=2

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

434.zeusmp: basepeak = yes

437.leslie3d: -fast -fma=fused -xpagesize=4M -xipo=2 -xprefetch_level=1

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

465.tonto: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast -xipo=1 -fsimple=1 -lfast

Benchmarks using both Fortran and C:

435.gromacs: -xprofile=collect:./feedback(pass 1) -xprofile=use:./feedback(pass 2) -fast(cc) -fast(f90) -fma=fused -xpagesize=4M -xipo=2 -xinline= -xchip=generic -fsimple=0 -xprefetch=latx:1.2 -xunroll=5

436.cactusADM: -fast(cc) -fast(f90) -fma=fused -xpagesize=4M -xipo=2 -xalias_level=std -xprefetch_auto_type=indirect_array_access -xprefetch_level=3 -xprefetch_level=2 -ll2amm

454.calculix: -fast(cc) -fast(f90) -fma=fused -xpagesize=4M -xipo=2 -xprefetch_level=1 -xprefetch=latx:3.0 -xalias_level=std -xprefetch_auto_type=indirect_array_access

481.wrf: -fast(cc) -fast(f90) -fma=fused -xpagesize=4M -xipo=1 -xprefetch_level=3 -xalias_level=std -xprefetch_auto_type=indirect_array_access -ll2amm

Peak Other Flags

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

C++ benchmarks:
`-xjobs=2 -verbose=diags,version`

Fortran benchmarks:
`-xjobs=2 -V -v`

Benchmarks using both Fortran and C:
`-xjobs=2 -V -# -v`

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

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 06:10:51 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 12 January 2010.