SPEC® CFP2006 Result

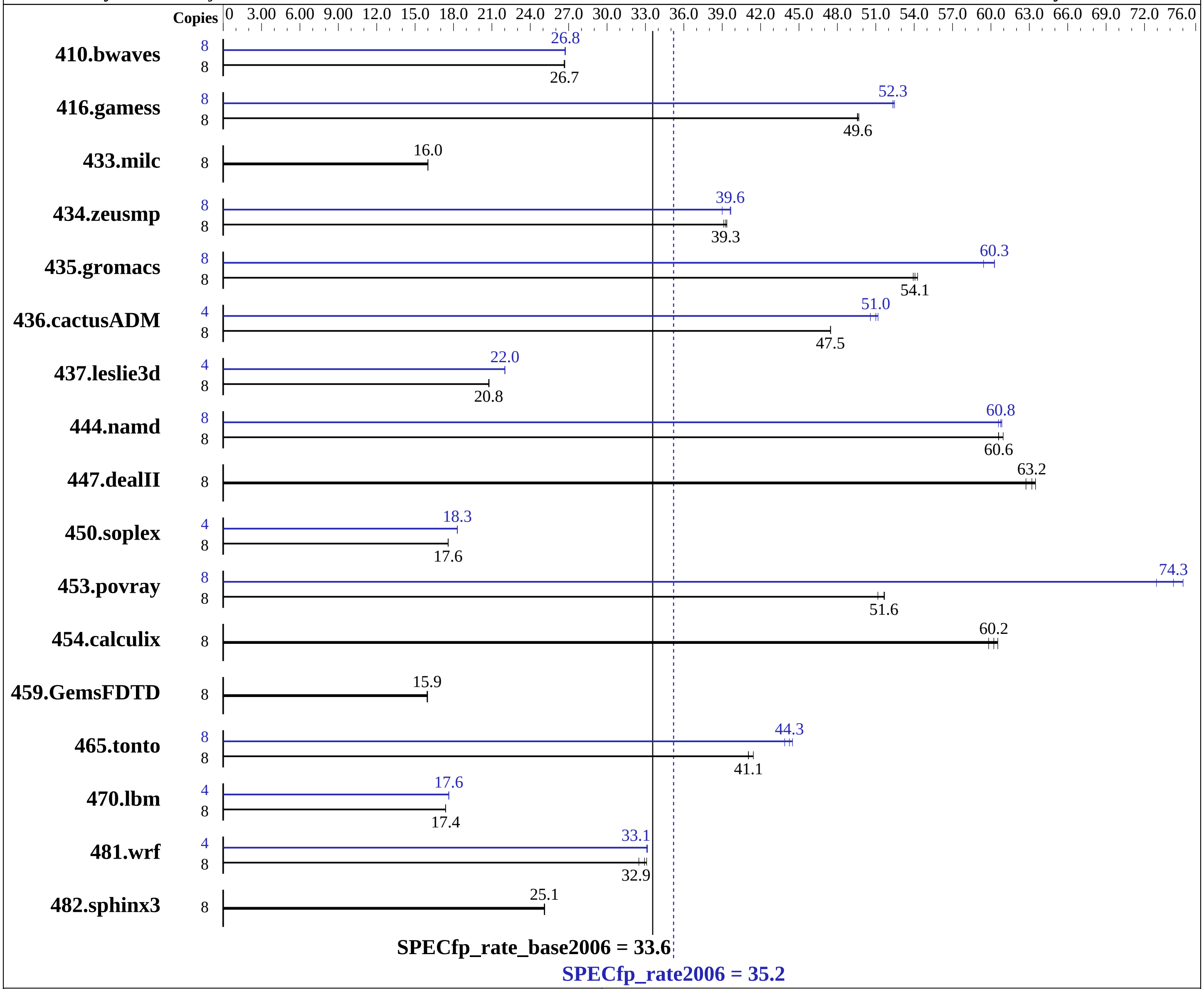
Sun Microsystems
Sun SPARC Enterprise M3000

SPECfp®_rate2006 = 35.2

SPECfp_rate_base2006 = 33.6

CPU2006 license: 6
Test sponsor: Sun Microsystems
Tested by: Fujitsu Limited

Test date: Sep-2008
Hardware Availability: Oct-2008
Software Availability: Oct-2008



Hardware

CPU Name:	SPARC64 VII
CPU Characteristics:	
CPU MHz:	2520
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

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Software

Operating System:	Solaris 10 10/08
Compiler:	Sun Studio 12 with patches 124861-08, 124863-06, 124867-07, 127143-03, 127000-05, 127001-01 (see patch information below)
Auto Parallel:	No
File System:	ufs
System State:	Default
Base Pointers:	32-bit

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L3 Cache: None
Other Cache: None
Memory: 16 GB (2 GB x 8), 2-way interleaved
Disk Subsystem: 73 GB 10,000 RPM Fujitsu MAY2073RC SAS
Other Hardware: None

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
410.bwaves	8	4071	26.7	**4076**	**26.7**	4080	26.6	8	4071	26.7	4063	26.8	**4064**	**26.8**
416.gamess	8	**3158**	**49.6**	3161	49.6	3153	49.7	8	**2993**	**52.3**	2993	52.3	2986	52.5
433.milc	8	**4589**	**16.0**	4592	16.0	4586	16.0	8	**4589**	**16.0**	4592	16.0	4586	16.0
434.zeusmp	8	1849	39.4	**1854**	**39.3**	1861	39.1	8	1835	39.7	**1837**	**39.6**	1867	39.0
435.gromacs	8	1052	54.3	**1057**	**54.1**	1059	53.9	8	948	60.3	961	59.4	**948**	**60.3**
436.cactusADM	8	**2014**	**47.5**	2015	47.5	2014	47.5	4	**937**	**51.0**	945	50.6	934	51.2
437.leslie3d	8	3625	20.7	**3624**	**20.8**	3617	20.8	4	1709	22.0	**1708**	**22.0**	1707	22.0
444.namd	8	1053	61.0	**1059**	**60.6**	1059	60.6	8	**1056**	**60.8**	1059	60.6	1054	60.9
447.dealII	8	1442	63.5	1459	62.7	**1448**	**63.2**	8	1442	63.5	1459	62.7	**1448**	**63.2**
450.soplex	8	3795	17.6	**3794**	**17.6**	3794	17.6	4	1824	18.3	**1823**	**18.3**	1823	18.3
453.povray	8	823	51.7	832	51.2	**824**	**51.6**	8	584	72.9	567	75.0	**573**	**74.3**
454.calculix	8	1103	59.8	1090	60.5	**1096**	**60.2**	8	1103	59.8	1090	60.5	**1096**	**60.2**
459.GemsFDTD	8	**5324**	**15.9**	5311	16.0	5328	15.9	8	**5324**	**15.9**	5311	16.0	5328	15.9
465.tonto	8	1918	41.0	1900	41.4	**1917**	**41.1**	8	**1779**	**44.3**	1794	43.9	1769	44.5
470.lbm	8	6327	17.4	**6324**	**17.4**	6323	17.4	4	3118	17.6	**3117**	**17.6**	3115	17.6
481.wrf	8	2751	32.5	**2714**	**32.9**	2700	33.1	4	1350	33.1	1347	33.2	**1348**	**33.1**
482.sphinx3	8	**6211**	**25.1**	6204	25.1	6214	25.1	8	**6211**	**25.1**	6204	25.1	6214	25.1

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

```
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:
   Default setting.

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.
```

Base Compiler Invocation

C benchmarks:
`cc`

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 -xprefetch_level=1
-xalias_level=std -xprefetch_auto_type=indirect_array_access

C++ benchmarks:
-library=stlport4 -fast -fma=fused -xipo=2 -xpagesize=4M
-xprefetch_level=1 -xalias_level=compatible

Fortran benchmarks:
-fast -fma=fused -xipo=2 -xpagesize=4M -xprefetch_level=1

Benchmarks using both Fortran and C:
-fast(cc) -fast(f90) -fma=fused -xipo=2 -xpagesize=4M
-xprefetch_level=1 -xalias_level=std
-xprefetch_auto_type=indirect_array_access

Base Other Flags

C benchmarks:
-xjobs=4

C++ benchmarks:
-xjobs=4

Fortran benchmarks:
-xjobs=4

Benchmarks using both Fortran and C:
-xjobs=4

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: `basepeak = yes`

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

482.sphinx3: `basepeak = yes`

C++ benchmarks:

444.namd: `-library=stlport4 -fast -fma=fused -xipo=2 -xpagesize=4M -xdepend -xalias_level=compatible`

447.dealII: `basepeak = yes`

450.soplex: `-library=stlport4 -xprofile=collect:./feedback`(pass 1) `-xprofile=use:./feedback`(pass 2) `-fast -xipo=1 -xpagesize=4M -xprefetch=no -fsimple=0 -xrestrict -xdepend -xalias_level=compatible`

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

Fortran benchmarks:

410.bwaves: `-fast -xipo=2 -xprefetch_level=2 -xprefetch_auto_type=indirect_array_access`

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

434.zeusmp: `-fast -fma=fused -xipo=2 -xpagesize=4M -lmopt`

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

459.GemsFDTD: `basepeak = yes`

465.tonto: `-xprofile=collect:./feedback`(pass 1) `-xprofile=use:./feedback`(pass 2) `-fast -xipo=2 -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 -xipo=2 -xpagesize=4M -xinline= -xchip=generic -fsimple=0`

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Peak Optimization Flags (Continued)

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

454.calculix: basepeak = yes

481.wrf: Same as 436.cactusADM

Peak Other Flags

C benchmarks:
-xjobs=4

C++ benchmarks:
-xjobs=4

Fortran benchmarks:
-xjobs=4

Benchmarks using both Fortran and C:
-xjobs=4

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.r3.20090713.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.r3.20090713.xml

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

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