SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu Limited

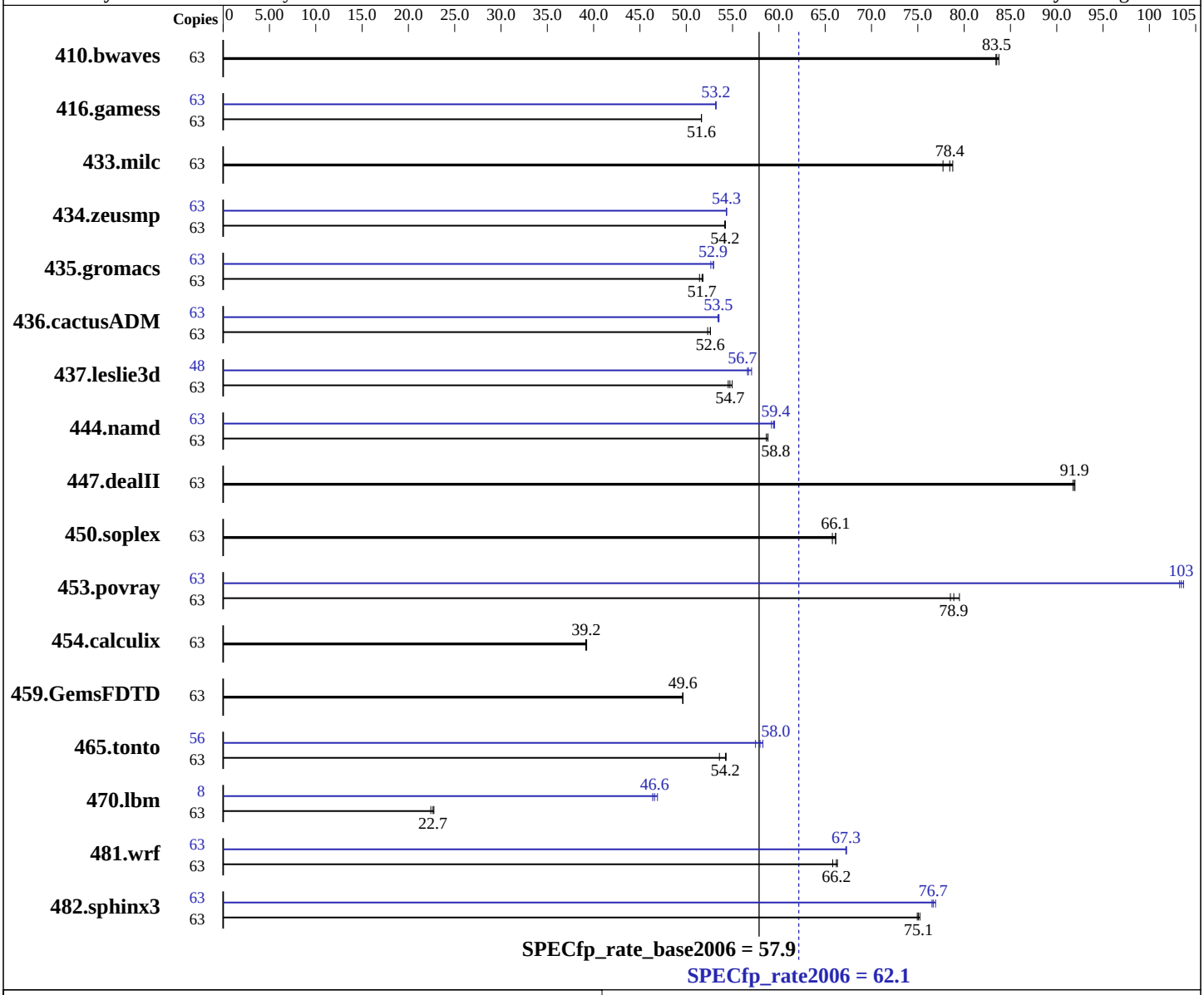
Fujitsu SPARC Enterprise T5120

SPECfp®_rate2006 = 62.1

SPECfp_rate_base2006 = 57.9

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

Test date: Jul-2007
Hardware Availability: Oct-2007
Software Availability: Aug-2007



Hardware

CPU Name:	UltraSPARC T2
CPU Characteristics:	
CPU MHz:	1417
FPU:	Integrated
CPU(s) enabled:	8 cores, 1 chip, 8 cores/chip, 8 threads/core
CPU(s) orderable:	1 chip
Primary Cache:	16 KB I + 8 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip

Continued on next page

Software

Operating System:	Solaris 10 8/07 (build s10s_u4wos_10)
Compiler:	Sun Studio 12 (build 2007/05/20)
Auto Parallel:	No
File System:	ufs
System State:	Default
Base Pointers:	32-bit
Peak Pointers:	32-bit
Other Software:	None

SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu Limited

Fujitsu SPARC Enterprise T5120

SPECfp_rate2006 = 62.1

SPECfp_rate_base2006 = 57.9

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

Test date: Jul-2007
Hardware Availability: Oct-2007
Software Availability: Aug-2007

L3 Cache: None
Other Cache: None
Memory: 64 GB
Disk Subsystem: 1 x 10,000 RPM Seagate ST973402SS 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	63	10222	83.8	**10251**	**83.5**	10261	83.4	63	10222	83.8	**10251**	**83.5**	10261	83.4
416.gamess	63	**23890**	**51.6**	23885	51.6	23890	51.6	63	23194	53.2	23181	53.2	**23185**	**53.2**
433.milc	63	7441	77.7	**7372**	**78.4**	7342	78.8	63	7441	77.7	**7372**	**78.4**	7342	78.8
434.zeusmp	63	10586	54.2	10572	54.2	**10577**	**54.2**	63	10545	54.4	10552	54.3	**10551**	**54.3**
435.gromacs	63	8747	51.4	8684	51.8	**8699**	**51.7**	63	**8501**	**52.9**	8543	52.7	8495	53.0
436.cactusADM	63	14310	52.6	**14313**	**52.6**	14391	52.3	63	**14078**	**53.5**	14061	53.5	14090	53.4
437.leslie3d	63	**10823**	**54.7**	10860	54.5	10775	55.0	48	7971	56.6	7908	57.1	**7955**	**56.7**
444.namd	63	**8593**	**58.8**	8589	58.8	8617	58.6	63	8487	59.5	8534	59.2	**8501**	**59.4**
447.dealII	63	7854	91.8	**7841**	**91.9**	7837	92.0	63	7854	91.8	**7841**	**91.9**	7837	92.0
450.soplex	63	7988	65.8	**7946**	**66.1**	7945	66.1	63	7988	65.8	**7946**	**66.1**	7945	66.1
453.povray	63	4269	78.5	**4249**	**78.9**	4216	79.5	63	3232	104	**3239**	**103**	3246	103
454.calculix	63	13277	39.1	13242	39.2	**13265**	**39.2**	63	13277	39.1	13242	39.2	**13265**	**39.2**
459.GemsFDTD	63	13462	49.7	**13465**	**49.6**	13475	49.6	63	13462	49.7	**13465**	**49.6**	13475	49.6
465.tonto	63	11415	54.3	**11431**	**54.2**	11570	53.6	56	**9507**	**58.0**	9456	58.3	9587	57.5
470.lbm	63	38600	22.4	**38212**	**22.7**	38040	22.8	8	2370	46.4	**2360**	**46.6**	2344	46.9
481.wrf	63	**10629**	**66.2**	10693	65.8	10611	66.3	63	**10463**	**67.3**	10466	67.2	10455	67.3
482.sphinx3	63	16385	74.9	16322	75.2	**16358**	**75.1**	63	**16017**	**76.7**	15964	76.9	16044	76.5

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

Compiler Invocation Notes

```
Compiler patches are available at
http://developers.sun.com/sunstudio/downloads/patches/ss12_patches.jsp
```

Operating System Notes

```
Processes were bound to cores using "submit" and "pbind".

 ulimit -s 131072 was used to allow the stack to grow
 up to 131072 KB (aka 128 MB).  Note that saying "131072"
 is preferable to "unlimited", because there is a tradeoff
 between space for the stack vs. space for the heap.
```

Continued on next page

Operating System Notes (Continued)

```
/etc/system parameters
   autoup=600
      Causes pages older than the listed number of seconds to
      be written by fsflush.
   tune_t_fsflushr=10
      Controls how many seconds elapse between runs of the
      page flush daemon, fsflush.

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

Platform Notes

```
This result was measured on a Sun SPARC Enterprise
T5120.  These models are electronically equivalent:
  - Sun SPARC Enterprise T5120
  - Fujitsu SPARC Enterprise T5120
```

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:
```
-g -fast -xipo=2 -xpagesize=4M -xprefetch_level=2 -xalias_level=std
-xprefetch_level=3 -xprefetch_auto_type=indirect_array_access
```

C++ benchmarks:
```
-g0 -library=stlport4 -fast -xipo=2 -xpagesize=4M -xprefetch_level=2
-xdepend -xalias_level=compatible
```

Fortran benchmarks:
```
-g -fast -xipo=2 -xpagesize=4M -xprefetch_level=2
```

Continued on next page

Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:
`-g -fast`(cc) `-fast`(f90) `-xipo=2 -xpagesize=4M -xprefetch_level=2 -xalias_level=std -xprefetch_level=3 -xprefetch_auto_type=indirect_array_access`

Base Other Flags

C benchmarks:
`-xjobs=16 -V`

C++ benchmarks:
`-xjobs=16 -verbose=diags,version`

Fortran benchmarks:
`-xjobs=16 -V`

Benchmarks using both Fortran and C:
`-xjobs=16 -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: `basepeak = yes`

470.lbm: `-g -xprofile=collect:./feedback`(pass 1) `-xprofile=use:./feedback`(pass 2) `-fast -xpagesize=4M -xprefetch_level=3 -xipo=2 -xrestrict`

Continued on next page

Peak Optimization Flags (Continued)

482.sphinx3: -g -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
-xinline= -xprefetch_level=2 -Wc,-Qlp-ol=1 -xrestrict
-xalias_level=strong -fsimple=1 -xlinkopt=2 -lfast

C++ benchmarks:

444.namd: -g0 -library=stlport4 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
-xdepend -xalias_level=compatible -xprefetch_level=1
-xlinkopt=2

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -g0 -library=stlport4 -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast -xpagesize=4M
-xdepend -xalias_level=compatible -xipo=2 -xrestrict
-xlinkopt=2

Fortran benchmarks:

410.bwaves: basepeak = yes

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

434.zeusmp: -g -fast -xpagesize=4M -xipo=1 -qoption cg -Qeps:enabled=1
-qoption cg -Qeps:ws=8 -lmopt

437.leslie3d: -g -fast -xpagesize_heap=4M -xpagesize_stack=64K
-xprefetch_level=3 -xprefetch=latx:1.6 -qoption cg -Qlp=1
-qoption cg -Qlp-fa=0 -qoption cg -Qlp-fl=1
-qoption cg -Qlp-av=448 -qoption cg -Qlp-t=4

459.GemsFDTD: basepeak = yes

465.tonto: -g -fast -xpagesize=4M -xipo=2 -lfast

Benchmarks using both Fortran and C:

435.gromacs: -g -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast(cc) -fast(f90)
-xpagesize=4M -xipo=1 -xinline= -xarch=generic
-xchip=generic -fsimple=0

436.cactusADM: -g -xprofile=collect:./feedback(pass 1)
-xprofile=use:./feedback(pass 2) -fast(cc) -fast(f90)
-xpagesize=4M -xipo=2 -fsimple=1 -xlinkopt=2

Continued on next page

Peak Optimization Flags (Continued)

454.calculix: `basepeak = yes`

481.wrf: `-g -xprofile=collect:./feedback`(pass 1)
`-xprofile=use:./feedback`(pass 2) `-fast`(cc) `-fast`(f90)
`-xpagesize=4M -xlinkopt=2`

Peak Other Flags

C benchmarks:
`-xjobs=16 -V`

C++ benchmarks:
`-xjobs=16 -verbose=diags,version`

Fortran benchmarks:
`-xjobs=16 -V`

Benchmarks using both Fortran and C:
`-xjobs=16 -V`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Sun-Solaris-Studio12.xml`

SPEC and SPECfp are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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 15:12:31 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 8 February 2008.