CFP2000 Result

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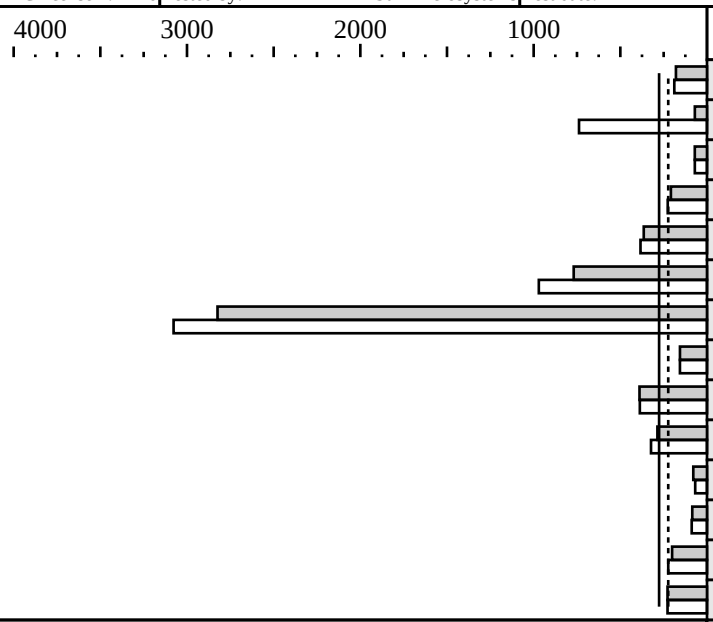
Sun Microsystems
Sun Fire E6900 (24 processor)

SPECfp_rate2000 = 276

SPECfp_rate_base2000 = 224

SPEC license #: 6 | Tested by: Sun Microsystems | Test date: Dec-2003 | Hardware Avail: Mar-2004 | Software Avail: Apr-2004



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	48	497	179	48	472	189
171.swim	48	2461	70.1	48	234	738
172.mgrid	48	1424	70.4	48	1427	70.2
173.applu	48	561	208	48	516	226
177.mesa	48	214	365	48	203	384
178.galgel	48	210	769	48	166	970
179.art	48	51.3	2824	48	47.0	3077
183.equake	48	464	156	48	464	156
187.facerec	48	272	389	48	273	388
188.ammp	48	428	286	48	379	323
189.lucas	48	1408	79.1	48	1637	68.0
191.fma3d	48	1376	85.0	48	1326	88.2
200.sixtrack	48	304	201	48	274	224
301.apsi	48	636	228	48	636	228

Hardware

CPU:	UltraSPARC s400
CPU MHz:	1200
FPU:	Integrated
CPU(s) enabled:	48 cores, 24 chips, 2 cores/chip
CPU(s) orderable:	4-24 (multiples of 4 chips)
Parallel:	No
Primary Cache:	32KBI+64KBD per core on chip (64KBI+128KBD on chip)
Secondary Cache:	8MB(I+D) per core off chip (16MB(I+D) off chip)
L3 Cache:	None
Other Cache:	None
Memory:	96GB 16-way interleaved
Disk Subsystem:	Sun StorEdge S1 Disk Array (2x36GB) Sun StorEdge T3 Array for the Workgroup (9x36GB)
Other Hardware:	None

Software

Operating System:	Solaris 9 04/04
Compiler:	Sun ONE Studio 8 Sun Performance Library 8
File System:	ufs with ufs logging
System State:	Multi-User

Notes/Tuning Information

```
Compiler invocation:
  C: cc
  CXX: CC
  F90: f90
  F77: f90

Floating point base flags:
    C:  -fast -xipo=2 -xalias_level=std with ONESTEP=yes and feedback
  F90:  -fast -xipo=2 with ONESTEP=yes and feedback

Floating point peak flags:
  ONESTEP=yes and feedback for all benchmarks, unless otherwise noted

  168.wupwise: -fast -xipo=2 -Qoption iropt -Ainline:inc=800:cp=1
```

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Notes/Tuning Information (Continued)

```
  171.swim:    -fast -xpad=common:3969 -xpagesize=64K -xprefetch=latx:1.6
               -Qoption iropt -Atile:skewp,-Ainline:cs=700
               (no feedback)
  172.mgrid:   -fast -xipo=2
  173.applu:   -fast -xipo=2
               -Qoption cg -Qlp=1-av=192-fa=1,-Qms_pipe+prefolim=7
               -Qoption iropt -Aujam:inner=g
  177.mesa:    -fast -xipo=2 -xalias_level=strong -xrestrict
               -Wc,-Qms_pipe+unoovf
  178.galgel:  -fast -xipo=2 -Qoption iropt -Addint:sf=9 -xlic_lib=sunperf
               RM_SOURCES=lapak.f90
  179.art:     -fast -xipo=2 -xalias_level=std
               -Wc,-Qms_pipe-prefst,-Qms_pipe+prefolim=11
  183.equake:  -fast -xipo=2 -xalias_level=strong -xprefetch_level=2
  187.facerec: -fast -xipo=2
  188.ammp:    -fast -xipo=2 -xalias_level=std -xpagesize=512K -lmopt -lm
  189.lucas:   -fast -xipo=2 -xprefetch_level=3 -Qoption iropt -Apf:pdl=1
               -Qoption f90comp -array_pad_rows,1977
  191.fma3d:   -fast -xipo=2 -stackvar -xprefetch_level=3
               -Qoption iropt -Apf:pdl=1
  200.sixtrack:-O -dalign -xchip=ultra3 -xarch=v8plusb -fsimple=2
  301.apsi:    -fast -xipo=2

Feedback is done as follows, unless otherwise noted:
  fdo_pre0:  rm -rf ./feedback.profile ./SunWS_cache
  PASS1:     -xprofile=collect:./feedback
  PASS2:     -xprofile=use:./feedback

Portability:
  178.galgel:  -e -fixed

Shell Environments:
  Stack size set to unlimited via "ulimit -s unlimited"
  MPSSHEAP=4M
  MPSSSTACK=4M
  LD_PRELOAD=mpss.so.1

Kernel Parameters (/etc/system):
  autoup=900
  tune_t_fsflushr=1

Processes were bound to CPUs using submit=pbind

The system was configured with multiple file systems.
The O/S was installed on one disk of the Sun StorEdge S1
Disk Array (ufs, ufs w/logging).  The benchmark was run on
the Sun StorEdge T3 Array, using H/W Raid 5 and ufs with
ufs logging file system.
```