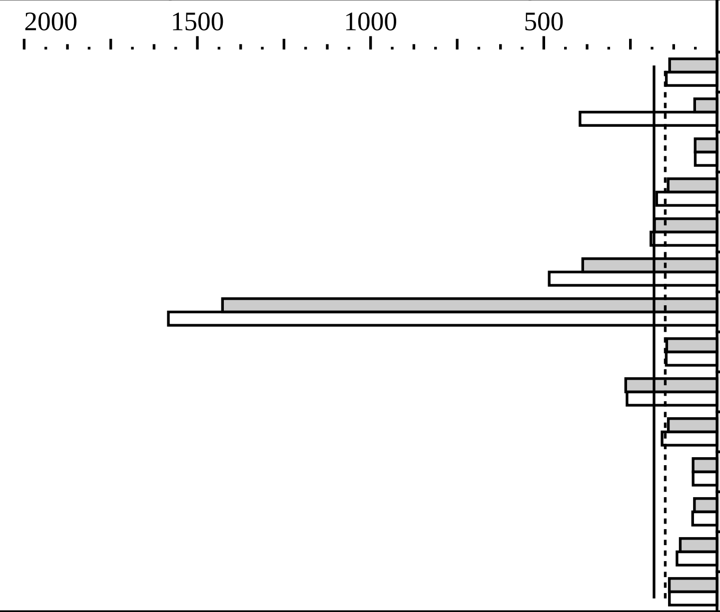
CFP2000 Result

Sun Microsystems
Sun Fire E4900 (12 processor)

SPECfp_rate2000 = 182
SPECfp_rate_base2000 = 149

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	24	326	137	24	305	146
171.swim	24	1339	64.5	24	218	395
172.mgrid	24	794	63.1	24	797	62.8
173.applu	24	414	141	24	336	174
177.mesa	24	216	180	24	204	191
178.galgel	24	208	388	24	167	484
179.art	24	50.7	1427	24	45.7	1584
183.equake	24	249	145	24	247	147
187.facerec	24	201	264	24	204	260
188.ammp	24	436	141	24	386	159
189.lucas	24	807	69.0	24	807	69.0
191.fma3d	24	898	65.1	24	832	70.3
200.sixtrack	24	289	106	24	265	116
301.apsi	24	526	138	24	527	137

Hardware

CPU:	UltraSPARC s400
CPU MHz:	1200
FPU:	Integrated
CPU(s) enabled:	24 cores, 12 chips, 2 cores/chip
CPU(s) orderable:	4, 8, 12 (order by # 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:	48GB 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: f77

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:    basepeak=yes
  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.
```