CFP2000 Result

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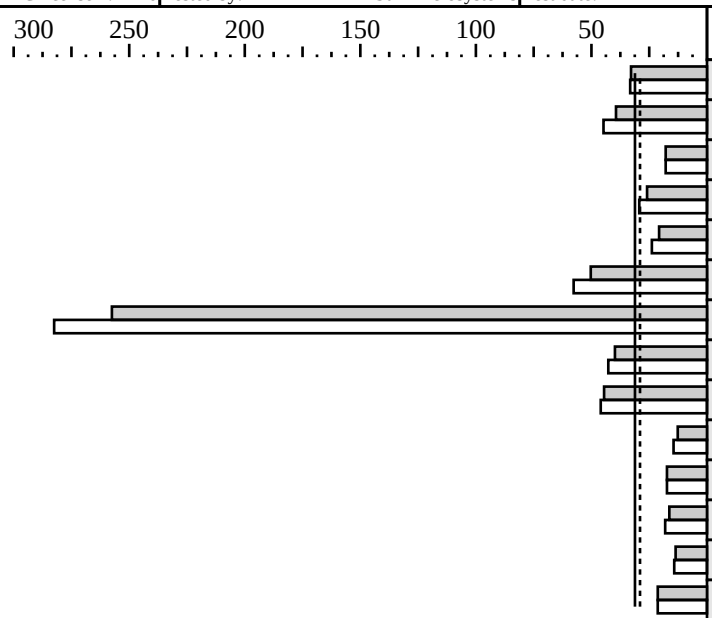
Sun Microsystems
Sun Ultra 45

SPECfp_rate2000 = 31.2

SPECfp_rate_base2000 = 29.0

SPEC license #: 6 | Tested by: Sun Microsystems | Test date: Feb-2006 | Hardware Avail: Jan-2006 | Software Avail: Jan-2006



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	113	32.9	2	112	33.2
171.swim	2	183	39.4	2	161	44.8
172.mgrid	2	234	17.9	2	234	17.9
173.applu	2	188	25.9	2	166	29.3
177.mesa	2	157	20.7	2	136	23.9
178.galgel	2	134	50.3	2	117	57.7
179.art	2	23.4	257	2	21.4	282
183.equake	2	75.7	39.8	2	70.6	42.7
187.facerec	2	99.0	44.5	2	95.9	46.0
188.ammp	2	403	12.7	2	353	14.5
189.lucas	2	268	17.3	2	268	17.3
191.fma3d	2	299	16.3	2	269	18.1
200.sixtrack	2	188	13.6	2	180	14.2
301.apsi	2	283	21.3	2	283	21.3

Hardware

CPU:	UltraSPARC IIIi
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	2 cores, 2 chips, 1 core/chip
CPU(s) orderable:	1,2 (order by # of chips)
Parallel:	No
Primary Cache:	32KBI+64KBD per chip (on chip)
Secondary Cache:	1MB(I+D) per chip (on chip)
L3 Cache:	None
Other Cache:	None
Memory:	16GB(8x2GB DIMMs)
Disk Subsystem:	SATA,250GB,7200 RPM
Other Hardware:	None

Software

Operating System:	Solaris 10 1/06
Compiler:	Sun Studio 11
File System:	ufs (default ufs logging on with Solaris 10)
System State:	Multi-User

Notes/Tuning Information

```
Compiler invocation:
  C: 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
 171.swim:    -fast -xpad=common:3969 -xpagesize=64K -xprefetch=latx:1.6
              -Qoption iropt -Atile:skewp,-Ainline:cs=700
              (no feedback)
 172.mgrid: basepeak = yes
```

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Notes/Tuning Information (Continued)

```
 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
               EXTRALIBS=-xlic_lib=sunperf
               RM_SOURCES=lapak.f90
 179.art:      -fast -xipo=2 -xalias_level=std -xprefetch=latx:1.5
 183.equake:   -fast -xipo=2 -xalias_level=strong -xprefetch_level=2
 187.facerec:  -fast -xipo=2 -xprefetch=latx:1.5
 188.ammp:     -fast -xarch=v9b -xipo=2 -xalias_level=std -lmopt -lm
 189.lucas:    basepeak=yes
 191.fma3d:    -fast -xipo=2 -stackvar -xprefetch_level=3
               -Qoption iropt -Apf:pdl=1
  -xO4 -dalign -xchip=ultra3 -xarch=v8plusb -fsimple=2 -xprefetch=no
 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:  -fixed

Shell Environments:
  Stack size set to unlimited via "ulimit -s unlimited"
  MPSSHEAP=512K
  MPSSSTACK=512K
  LD_PRELOAD=mpss.so.1

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

Processes were bound to CPUs using submit=pbind
```