



CFP2000 Result

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Sun Microsystems
Netra 20 (1200 MHz)

SPECfp_rate2000 = 23.6

SPECfp_rate_base2000 = 19.6

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	197	18.9	2	184	20.1
171.swim	2	480	15.0	2	121	59.5
172.mgrid	2	320	13.0	2	320	13.0
173.applu	2	300	16.2	2	229	21.3
177.mesa	2	201	16.2	2	194	16.8
178.galgel	2	147	45.8	2	123	54.7
179.art	2	26.1	231	2	23.6	255
183.quake	2	110	27.4	2	107	28.3
187.facerec	2	168	26.3	2	168	26.3
188.amp	2	373	13.7	2	340	15.0
189.lucas	2	532	8.73	2	405	11.5
191.fma3d	2	487	10.0	2	451	10.8
200.sixtrack	2	270	9.44	2	244	10.4
301.apsi	2	414	14.6	2	414	14.6

Hardware

CPU: UltraSPARC III Cu
CPU MHz: 1200
FPU: Integrated
CPU(s) enabled: 2 cores, 2 chips, 1 core/chip
CPU(s) orderable: 1-2
Parallel: No
Primary Cache: 32KBI+64KBD on chip
Secondary Cache: 8MB(I+D) off chip
L3 Cache: None
Other Cache: None
Memory: 4GB 4-way interleaved
Disk Subsystem: 2 x 18GB SEAGATE ST318304FC
Other Hardware: None

Software

Operating System: Solaris 9 4/03
Compiler: Sun ONE Studio 8 (pre-FCS build 3/9)
Sun Performance Library 8 (pre-FCS build 3/9)
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
171.swim: -fast -xpad=common:3969 -xpagesize=64K -xprefetch=latx:1.6
-Qoption iropt -Atile:skewp,-Ainline:cs=700
(no feedback)



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Notes/Tuning Information (Continued)

```
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.quake: -fast -xipo=2 -xalias_level=strong -xprefetch_level=2
187.facerec: -fast -xipo=2
188.ampp: -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=512K
MPSSSTACK=512K
LD_PRELOAD=mpss.so.1
```

Kernel Parameters (/etc/system):

```
default
autoup=900
tune_t_fsflushr=1
```