CFP2000 Result

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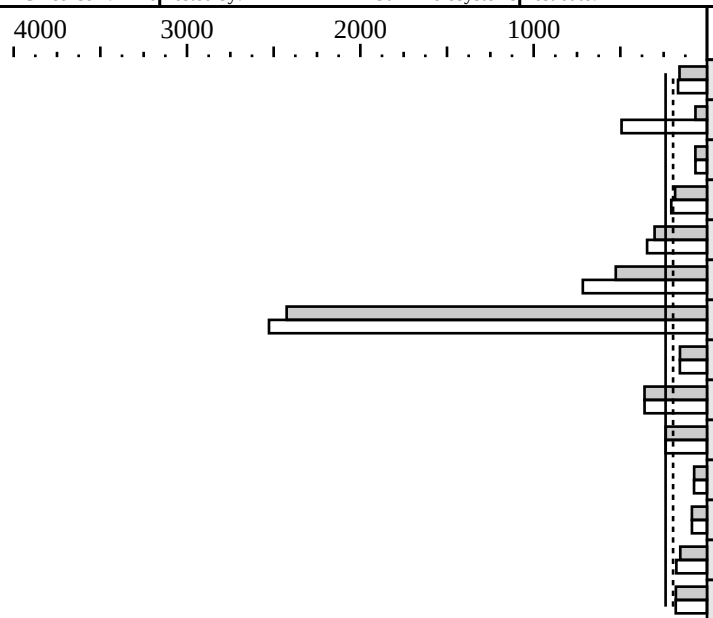
Sun Microsystems
Sun Fire E6900 (16 processor)

SPECfp_rate2000 = 239

SPECfp_rate_base2000 = 196

SPEC license #: 6 | Tested by: Sun Microsystems | Test date: Jan-2005 | Hardware Avail: Feb-2005 | Software Avail: Jan-2005



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	32	374	159	32	355	167
171.swim	32	1727	66.6	32	233	493
172.mgrid	32	998	67.0	32	1003	66.6
173.applu	32	424	184	32	378	206
177.mesa	32	172	302	32	150	346
178.galgel	32	205	526	32	150	716
179.art	32	39.8	2425	32	38.2	2527
183.equake	32	309	156	32	308	156
187.facerec	32	196	360	32	196	360
188.ammp	32	343	238	32	343	238
189.lucas	32	1002	74.1	32	993	74.7
191.fma3d	32	895	87.1	32	896	87.0
200.sixtrack	32	265	154	32	231	177
301.apsi	32	537	180	32	536	180

Hardware

CPU:	UltraSPARC IV
CPU MHz:	1350
FPU:	Integrated
CPU(s) enabled:	32 cores, 16 chips, 2 cores/chip
CPU(s) orderable:	4, 8, 12, 16, 20, 24 (order by number of 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:	128GB 16-way interleaved
Disk Subsystem:	Sun StorEdge S1 Disk Array (2x36GB) Sun StorEdge 6120 Array (14x73GB)
Other Hardware:	None

Software

Operating System:	Solaris 10
Compiler:	Sun Studio 10
File System:	ufs (default ufs logging on with Solaris 10)
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 note

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

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Notes/Tuning Information (Continued)

```
  171.swim:    -fast -Qoption ioprt -Atile:skewp -Qoption iropt
               -Aline:cs=700 -xpad=common:3969 -xpagesize=64K
               -xprefetch=latx:1.6 -Qoption cg -Qms_pipe-fpconv
               (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 -xpagesize=8K
  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 -xpagesize=8K
  183.equake:  -fast -xipo=2 -xalias_level=strong -xprefetch_level=2
  187.facerec: -fast -xipo=2
  188.ammp:    -fast -xipo=2 -xalias_level=std -lmopt -lm
  189.lucas:   -fast -xipo=2 -stackvar
  191.fma3d:   -fast -xipo=2
  200.sixtrack:-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:  -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):
  autoup=900
  tune_t_fsflushr=1

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 6120 Array, using H/W Raid 5 and ufs with
ufs logging file system.
```