CFP2000 Result

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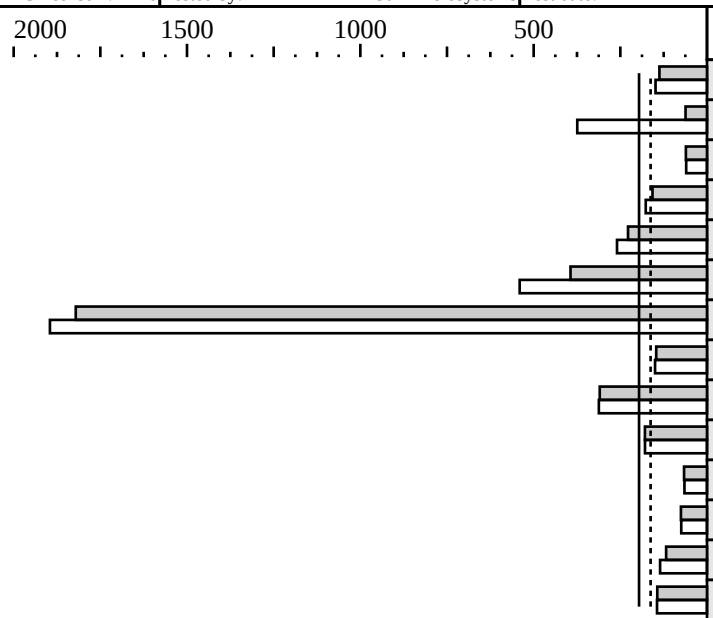
Sun Microsystems
Sun Fire E6900 (12 processor)

SPECfp_rate2000 = 196

SPECfp_rate_base2000 = 163

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	24	325	137	24	300	148
171.swim	24	1394	61.9	24	231	374
172.mgrid	24	823	60.9	24	835	60.0
173.applu	24	372	157	24	331	177
177.mesa	24	171	228	24	150	260
178.galgel	24	205	394	24	149	540
179.art	24	39.8	1821	24	38.2	1895
183.equake	24	247	146	24	242	150
187.facerec	24	171	309	24	170	312
188.ammp	24	342	179	24	342	179
189.lucas	24	841	66.2	24	856	65.0
191.fma3d	24	778	75.2	24	787	74.3
200.sixtrack	24	260	118	24	226	135
301.apsi	24	505	143	24	502	144

Hardware

CPU:	UltraSPARC IV
CPU MHz:	1350
FPU:	Integrated
CPU(s) enabled:	24 cores, 12 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:	96GB 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.
```