CFP2000 Result

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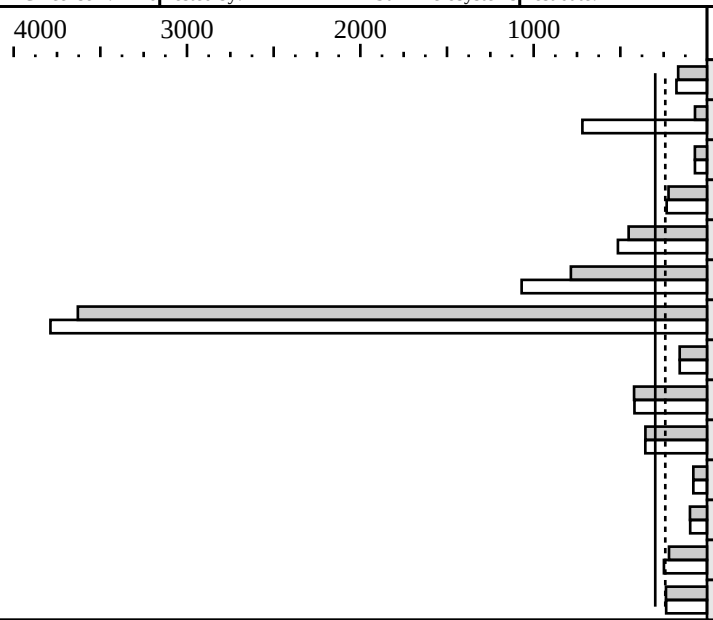
Sun Microsystems
Sun Fire E6900 (24 processor)

SPECfp_rate2000 = 299

SPECfp_rate_base2000 = 241

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	48	536	166	48	505	176
171.swim	48	2491	69.3	48	240	719
172.mgrid	48	1434	69.9	48	1442	69.5
173.applu	48	527	222	48	503	233
177.mesa	48	172	452	48	152	514
178.galgel	48	206	785	48	151	1069
179.art	48	39.9	3630	48	38.2	3788
183.equake	48	459	158	48	460	157
187.facerec	48	251	421	48	253	418
188.ammp	48	345	355	48	344	356
189.lucas	48	1412	78.8	48	1413	78.8
191.fma3d	48	1190	98.3	48	1206	97.0
200.sixtrack	48	279	219	48	246	248
301.apsi	48	612	237	48	615	236

Hardware

CPU:	UltraSPARC IV
CPU MHz:	1350
FPU:	Integrated
CPU(s) enabled:	48 cores, 24 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:	192GB 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.
```