CFP2000 Result

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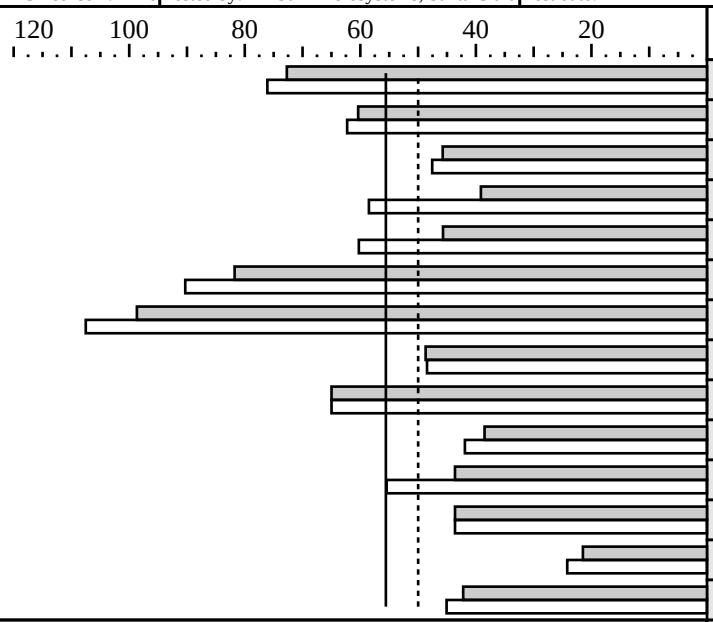
Sun Microsystems
Sun Fire X4200

SPECfp_rate2000 = 55.6

SPECfp_rate_base2000 = 50.0

SPEC license #: 6 | Tested by: Sun Microsystems, Santa Clara | Test date: Mar-2006 | Hardware Avail: May-2006 | Software Avail: Mar-2006



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	51.0	72.7	2	48.8	76.1
171.swim	2	119	60.4	2	115	62.3
172.mgrid	2	91.3	45.7	2	87.8	47.6
173.applu	2	124	39.1	2	83.3	58.5
177.mesa	2	71.1	45.7	2	53.9	60.3
178.galgel	2	82.3	81.8	2	74.5	90.3
179.art	2	61.1	98.7	2	56.1	108
183.equake	2	61.9	48.7	2	62.2	48.5
187.facerec	2	67.8	65.0	2	67.8	65.0
188.ammp	2	133	38.5	2	122	41.9
189.lucas	2	106	43.6	2	83.7	55.4
191.fma3d	2	112	43.6	2	112	43.6
200.sixtrack	2	119	21.5	2	106	24.2
301.apsi	2	143	42.2	2	134	45.1

Hardware

CPU:	AMD Opteron (TM) 256
CPU MHz:	3000
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:	64KBI + 64KBD (on chip) per core
Secondary Cache:	1024KB (I+D) (on chip) per core
L3 Cache:	N/A
Other Cache:	N/A
Memory:	16GB (8x2GB, PC3200 CL3 DDR ECC Registered SDRAM)
Disk Subsystem:	SAS,36GB,10K RPM
Other Hardware:	None

Software

Operating System:	SUSE LINUX Enterprise Server 9 SP3 (x86_64)
Compiler:	PathScale EKOPath(TM) Compiler Suite, Version 2.3 PGI Compiler for Linux, Release 6.1-3 AMD Core Mathematical Library (ACML), Version 3.0.1
File System:	ufs
System State:	Multi-user

Notes/Tuning Information

```
Portability flags:
   178.galgel (pgf90)   : -Mfixed

Feedback Optimization +FDO:
   PGI     : PASS1=-Mpfi                PASS2=-Mpfo
   PathSale: PASS1=-fb_create fbdata    PASS2=-fb_opt fbdata

Baseline Optimization Flags:
   C programs      : pgcc  -fastsse -Mipa=fast,inline +FDO
   Fortran programs: pgf90 -fastsse -Mipa=fast,inline +FDO

Peak Tuning Flags:
 168.wupwise:  pathf95 -Ofast -LNO:prefetch_ahead=5:prefetch=3
               -OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3
               -IPA:linear=on:plimit=50000:callee_limit=5000
               -CG:local_fwd_sched=on -m3dnow
 171.swim:     pathf95 -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
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Notes/Tuning Information (Continued)

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 172.mgrid:    pathf95 -Ofast -CG:gcm=off -OPT:IEEE_a=3:unroll_size=200
               -LNO:fusion=2:fission=1:blocking=off:prefetch_ahead=2
               -WOPT:mem_opnds=on:aggstr=0
 173.applu:    pathf95 -Ofast -CG:local_fwd_sched=on -OPT:ro=3 -TENV:X=3
               -LNO:fusion=2:fission=2:full_unroll_size=10000:prefetch=3
               +FDO
 177.mesa:     pathf95 -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on
               -WOPT:mem_opnds=on +FDO
 178.galgel:   pgf90  -fastsse -O4 -Mipa=fast,inline ONESTEP=yes +FDO
                RM_SOURCES=lapak.f90
                EXTRALIBS=-lacml
 179.art:      pgcc -fastsse -Munroll=n:9 -Mipa=fast,inline -tp k8-32
 183.equake:   pgcc -fastsse -Mflushz -Mnovect -Mipa=fast,inline ONESTEP=yes +FDO
 187.facerec:  pgf90  basepeak=1
 188.ammp:     pathcc -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
               -fno-math-errno -TENV:X=4 +FDO
 189.lucas:    pathf95 -O3 -OPT:ro=3:fast_nint=off:unroll_size=256
               -WOPT:mem_opnds=on +FDO
 191.fma3d:    pgf90  basepeak=1
 200.sixtrack: pathf95 -O3 -OPT:Ofast:Olimit=6000:early_intrinsics=on
               -fno-math-errno -CG:load_exe=1 +FDO
 301.apsi:     pathf95 -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2

taskset has been used to bind processes to CPUs
Default BIOS settings was used.

This result was measured on the Sun Fire X4200.  In addition,
Sun has submitted the same result for the Sun Fire X4100, which is
electronically equivalent to the Sun Fire X4200.
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