CFP2000 Result

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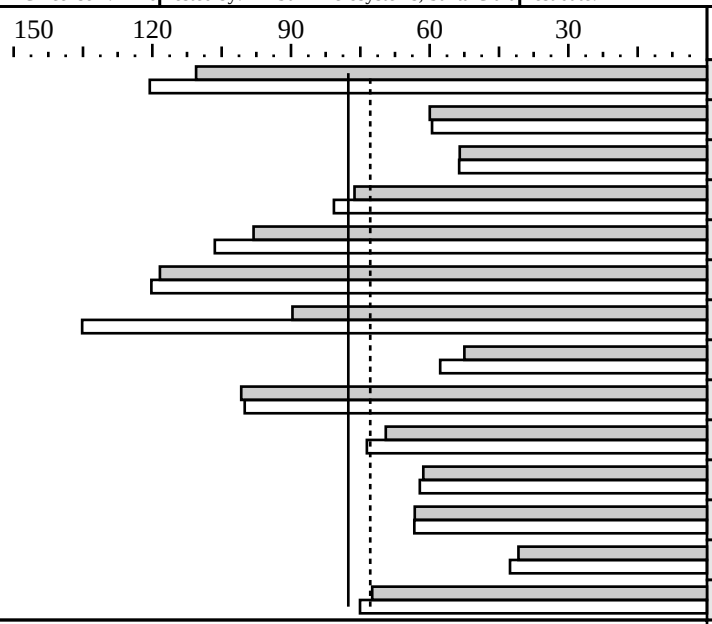
Sun Microsystems
Sun Ultra 40

SPECfp_rate2000 = 77.6

SPECfp_rate_base2000 = 72.9

SPEC license #: 6 | Tested by: Sun Microsystems, Santa Clara | Test date: Feb-2006 | Hardware Avail: Mar-2006 | Software Avail: Dec-2005



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	67.2	111	4	61.6	121
171.swim	4	240	60.0	4	242	59.5
172.mgrid	4	156	53.5	4	156	53.6
173.applu	4	128	76.3	4	121	80.7
177.mesa	4	66.2	98.1	4	61.0	106
178.galgel	4	114	118	4	112	120
179.art	4	135	89.7	4	89.2	135
183.equake	4	115	52.5	4	104	57.7
187.facerec	4	87.5	101	4	88.1	100
188.ammp	4	147	69.5	4	139	73.6
189.lucas	4	151	61.4	4	149	62.1
191.fma3d	4	154	63.2	4	154	63.3
200.sixtrack	4	125	40.8	4	120	42.6
301.apsi	4	167	72.4	4	161	75.1

Hardware

CPU:	AMD Opteron (TM) 285
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/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:	SATA,250GB,7200 RPM
Other Hardware:	None

Software

Operating System:	SuSE Linux 9.0 SLES 64 bit (SP3)
Compiler:	PathScale EKOPath(TM) Compiler Suite, Version 2.3 AMD Core Mathematical Library (ACML), Version 3.0.0
File System:	ufs
System State:	Multi-user

Notes/Tuning Information

```
Compiler invocation:
  C  : pathcc
  FC : pathf95
  F77: pathf95

Portability flags:
   178.galgel: -fixedform

Feedback Optimization:
 +FDO: PASS1=-fb_create fbdata   PASS2=-fb_opt fbdata

AMD Core Math Library
+ACML  means -L<acml-install-dir>/pathscale64/lib -lacml,
        which links with AMD Core Math Library

Baseline Optimization Flags:
   C programs:       -Ofast -WOPT:mem_opnds=on +FDO
```

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Notes/Tuning Information (Continued)

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    Fortran programs: -Ofast -LNO:fusion=2 -OPT:fast_complex=on +FDO

Peak Tuning Flags:
 168.wupwise:  -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
               -INLINE:aggressive=on
 171.swim:     -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
 172.mgrid:    -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:    -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:     -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on
               -WOPT:mem_opnds=on +FDO
 178.galgel:   -Ofast -OPT:fast_complex=on +ACML +FDO
 179.art:      -O3 -OPT:Ofast -fno-math-errno -mno-sse2 -m32
 183.equake:   -Ofast -CG:load_exe=2 -WOPT:mem_opnds=on -m32 +FDO
 187.facerec:  -Ofast -LNO:fusion=2
               -OPT:fast_complex=on:IEEE_NaN_Inf=off:unroll_size=0 +FDO
 188.ammp:     -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
               -fno-math-errno -TENV:X=4 +FDO
 189.lucas:    -Ofast -OPT:ro=3:fast_nint=off:unroll_size=256
               -WOPT:mem_opnds=on +FDO
 191.fma3d:    -O2 -ipa -CG:load_exe=1 -OPT:Ofast:IEEE_arith=3:ro=3
               -WOPT:mem_opnds=on:retype_expr=on -IPA:pu_reorder=1 +FDO
 200.sixtrack: -O3 -OPT:Ofast:Olimit=6000:early_intrinsics=on
               -fno-math-errno -CG:load_exe=1 +FDO
 301.apsi:     -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2

Default BIOS settings was used.

taskset has been used to bind processes to CPUs
```