



CFP2000 Result

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Sun Microsystems
Sun Ultra 40

SPECfp2000 = 2453

SPECfp_base2000 = 2201

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	50.1	3195	46.0	3480	
171.swim	3100	116	2673	114	2725	
172.mgrid	1800	89.9	2001	86.6	2078	
173.applu	2100	122	1725	81.1	2589	
177.mesa	1400	70.7	1979	53.4	2619	
178.galgel	2900	79.7	3637	72.7	3987	
179.art	2600	59.4	4373	53.4	4865	
183.quake	1300	59.9	2171	60.3	2155	
187.facerec	1900	66.4	2863	66.4	2863	
188.amp	2200	130	1694	119	1843	
189.lucas	2000	104	1922	82.4	2429	
191.fma3d	2100	110	1916	110	1916	
200.sixtrack	1100	118	936	105	1052	
301.apsi	2600	140	1855	131	1980	

Hardware

CPU: AMD Opteron (TM) 256
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 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: 8GB (4x2GB, PC3200 CL3 DDR ECC Registered SDRAM)
 Disk Subsystem: SATA,250GB,7200 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.quake: pgcc -fastsse -Mflushz -Mvect -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.
 System was tested in 1-chip configuration.