CFP2000 Result

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IBM Corporation

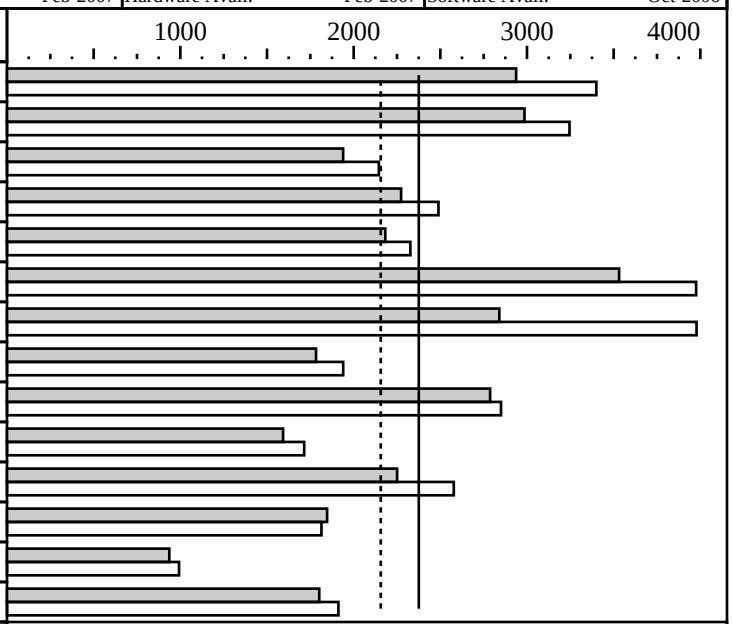
IBM System X 3655 (AMD Opteron 2220)

SPECfp2000 = 2376

SPECfp_base2000 = 2156

SPEC license #: 11 | Tested by: IBM Corporation | Test date: Feb-2007 | Hardware Avail: Feb-2007 | Software Avail: Oct-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	54.5	2937	47.1	3400
171.swim	3100	104	2986	95.5	3245
172.mgrid	1800	92.8	1939	83.9	2145
173.applu	2100	92.4	2274	84.4	2489
177.mesa	1400	64.1	2183	60.2	2327
178.galgel	2900	82.1	3531	72.9	3976
179.art	2600	91.5	2840	65.4	3978
183.equake	1300	72.9	1783	67.0	1940
187.facerec	1900	68.2	2787	66.7	2850
188.ammp	2200	138	1593	128	1714
189.lucas	2000	88.9	2251	77.6	2578
191.fma3d	2100	114	1847	116	1814
200.sixtrack	1100	117	936	111	993
301.apsi	2600	144	1801	136	1912



Hardware

CPU:	AMD Opteron 2220
CPU MHz:	2800
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2 chips
Parallel:	No
Primary Cache:	64 KB I + 64 KB D on chip (per core)
Secondary Cache:	1 MB I+D on chip (per core)
L3 Cache:	N/A
Other Cache:	N/A
Memory:	16 GB (8x2 GB PC2-5300)
Disk Subsystem:	1x36 GB 15K SAS
Other Hardware:	

Software

Operating System:	SuSE Linux Enterprise Server 9 (x86_64) SP 3 SuSE kernel 2.6.5-7.244-default
Compiler:	PathScale EKOPath(TM) Compiler Suite, Release 2.5 AMD Core Math Library 3.5.0
File System:	Linux/ext2
System State:	Multi-user run level 3

Notes/Tuning Information

```
+FDO: PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata
+ACML  means -L/pathscale64/lib -lacml,
       which causes linking with AMD Core Math Library V2.7.0

Base tuning for C programs: -Ofast -WOPT:mem_opnds=on +FDO
Base tuning for FORTRAN programs: -Ofast -LNO:fusion=2 -OPT:fast_complex=on +FDO
Portability flags:
  178.galgel:    -fixedform
Peak tuning:
  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 +FDO
```

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Notes/Tuning Information (Continued)

```
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 RM_SOURCES=lapak.f90 +FDO +acml
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
```